14 CFR Part 150 Noise Compatibility Program Update

John Glenn Columbus International Airport

Final – April 2025

PREPARED FOR
Columbus Regional Airport Authority

Volume 2 of 2

PRESENTED BY
Landrum & Brown, Incorporated

This page intentionally left blank

Table of Contents

Page

Appendix A - FAA Policies, Guidance, and Regulations A-1
A.1 Federal Laws and Policies and Research Related to Noise A-1
A.1.1 Noise Control Act A-1
A.1.2 U.S. Environmental Protection Agency Noise Assessment Guidelines A-1
A.1.3 Federal Aviation Noise Abatement Policy A-1
A.1.4 Aviation Safety and Noise Abatement Act of 1979 A-1
A.1.5 Airport Noise and Capacity Act of 1990 A-2
A.1.6 14 CFR Part 36 A-2
A.1.7 14 CFR Part 91 A-2
A.1.8 14 CFR Part 150 A-3
A.1.9 14 CFR Part 161 A-3
A.1.10 Federal Interagency Committee on Noise A-4
A.1.11 Federal Requirements to use DNL in Environmental Noise Studies A-5
A.2 Federal Laws and Policies Related to Noise/Land Use Compatibility A-8
A.2.1 FAA Final Policy on Part 150 Noise Mitigation Measures A-10
A.2.2 FAA Airport Improvement Program Handbook A-12
A.2.3 Program Guidance Letters A-14
Appendix B - Noise Measurements and Complaints B-1
B.1 Noise Measurement Program B-1
B.1.1 Field Noise Measurement Equipment B-1
B.1.2 Field Noise Measurement Procedures B-2
B.1.3 Field Noise Measurement Sites B-2
B.1.4 Weather Information B-8
B.1.5 Short-Term Noise Measurement Results Summary B-8
B.2 Permanent Noise Monitoring System B-11
B.3 Comparison of Flight Profiles B-12
B.4 Noise Complaint History B-14
Appendix C - Noise Methodology C-1
C.1 Characteristics of Sound C-1
C.1.1 Sound Level C-1
C.1.2 Sound Frequency C-7
C.1.3 Duration of Sounds C-7
C.1.4 Perceived Noise Level C-7
C.1.5 Propagation of Noise C-9
C.2 Factors Influencing Human Response to Sound C-9
C.3 Standard Noise Descriptors C-10
C.3.1 Maximum Level (Lmax) C-10
C.3.2 Time Above Level (TA) C-10
C.3.3 Number of Events Above Level (NA) C-10
C.3.4 Sound Exposure Level (SEL) C-10
C.3.5 Equivalent Sound Level (Leq) C-11
C.3.6 Day-Night Average Sound Level (DNL) C-11
C.3.7 Federal Requirements to Use DNL in Environmental Noise Studies C-12

Table of Contents

Page

C.4 Health Effects of Noise C-17
C.4.1 Cardiovascular Effects C-17
C.4.2 Hearing Loss C-17
C.4.3 Sleep Disturbance C-18
C.4.4 Communication Interference C-20
C.5 Baseline Noise Modeling Methodology C-22
C.5.1 Existing (2024) Baseline Noise Exposure Contour Input Data C-22
C.5.2 Future (2029) Baseline Noise Exposure Contour Input Data C-63
C.5.3 Comparability of Conditions C-69
Appendix D - Land Use Assessment Methodology D-1
D.1 Airport Environs and General Study Area D-1
D.2 Land Use Mapping D-1
D.2.1 Land Use Classifications D-1
D.2.2 GIS Data Compilation D-3
D.2.3 Noise-Sensitive Public Facilities D-3
D.2.4 Development Trends D-4
D.2.5 Existing Historic Sites D-16
D.3 Preventative Local Land Use Controls D-21
D.3.2 Corrective Land Use Mitigation Alternatives D-23
D.4 Existing Land Use Controls D-24
D.4.1 Role of Local Jurisdictions and Planning Organizations in Noise Compatibility Planning D-25
D.4.2 Zoning Data Compilation D-25
D.5 FAA Land Use Planning Guidelines D-33
Appendix E - Noise Abatement Alternatives E-1
E.1 Potential Noise Abatement Alternatives E-1
E.2 Currently-Approved Land Use Measures E-2
E.3 Consideration of Alternative Noise Abatement Measures E-6
Appendix F - Land Use Alternatives F-1
F.1 Potential Land Use Controls F-1
F.2 Currently-Approved Land Use Measures F-2
F.3 Consideration of Alternative Land Use Measures F-4
Appendix G - Public Involvement G-1
G.1 Technical Advisory Committee G-1
G.2 Public Information Meetings G-4
G.3 Public Hearing G-4
G.4 Availability of the Document for Public Review G-6
Appendix H - Forecast G-1

List of Tables

		Page
TABLE A-1	LAND USE COMPATIBILITY GUIDELINES – 14 CFR PART 150	A-9
TABLE B-1	ACOUSTICAL MEASUREMENT INSTRUMENTATION	B-2
TABLE B-2	FIELD NOISE MEASUREMENT SITES	B-7
TABLE B-3	SHORT TERM FIELD NOISE MEASUREMENT PROGRAM SUMMARY	B-9
TABLE B-4	NOISE LEVELS AT PERMANENT NOISE MONITOR SITES	B-11
TABLE B-5	AIRCRAFT NOISE SINGLE EVENT DATA	B-13
TABLE B-6	SUMMARY OF NOISE COMPLAINTS	B-14
TABLE B-7	NOISE COMPLAINTS BY TIME OF DAY	B-17
TABLE C-1	SUMMARY OF AVERAGE-ANNUAL DAY OPERATIONS – EXISTING (2024) BASELINE	C-23
TABLE C-2	EXISTING (2024) AVERAGE-ANNUAL DAY OPERATIONS BY AIRCRAFT TYPE	C-27
TABLE C-3	EXISTING (2024) RUNWAY END UTILIZATION	C-31
TABLE C-4	EXISTING (2024) ARRIVAL FLIGHT TRACK UTILIZATION	C-47
TABLE C-5	EXISTING (2024) DEPARTURE FLIGHT TRACK UTILIZATION	C-51
TABLE C-6	EXISTING (2024) TOUCH-AND-GO FLIGHT TRACK UTILIZATION	C-59
TABLE C-7	EXISTING (2024) STAGE LENGTHS	C-60
TABLE C-8	EXISTING (2024) RUN-UP OPERATIONS	C-60
TABLE C-9	SUMMARY OF AVERAGE-ANNUAL DAY OPERATIONS – FUTURE (2029) BASELINE	C-63
TABLE C-10	FUTURE (2029) AVERAGE-ANNUAL DAY OPERATIONS BY AIRCRAFT TYPE	C-64
TABLE C-11	FUTURE (2029) DEPARTURE STAGE LENGTHS	C-68
TABLE C-12	FUTURE (2029) RUN-UP OPERATIONS	C-68
TABLE D-1	GENERALIZED LAND USE CLASSIFICATIONS	D-2
TABLE D-2	NOISE-SENSITIVE PUBLIC FACILITIES	D-7
TABLE D-3	HISTORIC SITES WITHIN GENERAL STUDY AREA	D-19
TABLE D-4	GENERALIZED ZONING CLASSIFICATIONS	D-29
TABLE E-1	FUTURE (2029) BASELINE HOUSING, POPULATION, AND NOISE-SENSITIVE FACILITY INCOMPATIBILITIES	E-5
TABLE G-1	TECHNICAL ADVISORY COMMITTEE (TAC) MEMBERSHIP	G-1

List of Exhibits

		Page
EXHIBIT A-1	SCHULTZ CURVE	A-7
EXHIBIT B-1	NOISE MEASUREMENT SITES	B-5
EXHIBIT B-2	LOCATION OF NOISE COMPLAINTS (2009 – 2023)	B-15
EXHIBIT C-1	COMPARISON OF SOUND	C-3
EXHIBIT C-2	EXAMPLE ADDITION OF TWO DECIBEL LEVELS	C-5
EXHIBIT C-3	EXAMPLE OF SOUND LEVEL AVERAGING	C-6
EXHIBIT C-4	SOUND FREQUENCY WEIGHTING CURVES	C-8
EXHIBIT C-5	MEASUREMENT OF DIFFERENT TYPES OF SOUND	C-13
EXHIBIT C-6	RELATIONSHIP AMONG SOUND METRICS	C-15
EXHIBIT C-7	SLEEP DISTURBANCE DOSE-RESPONSE CURVES	C-19
EXHIBIT C-8	NOISE EFFECTS ON DISTANCE NECESSARY FOR SPEECH COMMUNICATION	C-21
EXHIBIT C-9	CURRENT AIRFIELD LAYOUT	C-25
EXHIBIT C-10	EAST FLOW LARGE JET TRACKS	C-33
EXHIBIT C-11	EAST FLOW REGIONAL JET TRACKS	C-35
EXHIBIT C-12	EAST FLOW PROP AIRCRAFT TRACKS	C-37
EXHIBIT C-13	WEST FLOW LARGE JET TRACKS	C-39
EXHIBIT C-14	WEST FLOW REGIONAL JET TRACKS	C-41
EXHIBIT C-15	WEST FLOW PROP AIRCRAFT TRACKS	C-43
EXHIBIT C-16	TOUCH-AND-GO TRACKS	C-45
EXHIBIT C-17	RUN-UP LOCATIONS	C-61
EXHIBIT D-1	EXISTING NOISE-SENSITIVE PUBLIC FACILITIES	D-5
EXHIBIT D-2	EXISTING HISTORIC SITES	D-17
EXHIBIT D-3	GENERALIZED EXISTING ZONING	D-27
EXHIBIT E-1	ALTERNATIVE NA-A FLIGHT CORRIDOR	E-7
EXHIBIT E-2	ALTERNATIVE NA-B FLIGHT CORRIDOR	E-11
EXHIBIT E-3	ALTERNATIVE NA-C FLIGHT CORRIDOR	E-15
EXHIBIT E-4	ALTERNATIVE NA-D FLIGHT CORRIDOR	E-19

Appendix A - FAA Policies, Guidance, and Regulations

A.1 Federal Laws and Policies and Research Related to Noise

This section presents information regarding noise and land use criteria that may be useful in the evaluation of noise impacts. With respect to airports, the FAA has a long history of publishing noise and land use assessment criteria. These laws and regulations provide the basis for local development of airport noise compatibility plans, analyses of airport impacts, and the enactment of noise compatibility policies. Other agencies, including the USEPA and the Department of Defense, have developed noise and land use criteria. A summary of some of the more pertinent regulations and guidelines is presented in the following paragraphs.

A.1.1 Noise Control Act

Congress passed the Noise Control Act (42 U.S.C. §4901 et seq.) in 1972, which established a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. This act set forth the foundation for conducting research and setting guidelines to restrict noise pollution.

A.1.2 U.S. Environmental Protection Agency Noise Assessment Guidelines

In response to the Noise Control Act, the U.S. Environmental Protection Agency (USEPA) published *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* This document identifies safe levels of environmental noise exposure without consideration for economic cost for achieving these levels. In this document, 55 dB DNL is identified as the requisite level with an adequate margin of safety for residential and recreational uses. This document does not constitute USEPA regulations or standards; rather, it is intended to "provide state and local governments as well as the Federal government and the private sector with an informational point of departure for the purpose of decision-making."

A.1.3 Federal Aviation Noise Abatement Policy

On November 18, 1976, the U.S. Department of Transportation and FAA jointly issued the Federal Aviation Noise Abatement Policy. This policy recognized aircraft noise as a major constraint on the further development of the commercial aviation and established key responsibilities for addressing aircraft noise. The policy stated that the Federal Government has the authority and responsibility to regulate noise at the source by designing and managing flight procedures to limit the impact of aircraft noise on local communities; and by providing funding to airports for noise abatement planning.

A.1.4 Aviation Safety and Noise Abatement Act of 1979

The Aviation Safety and Noise Abatement Act of 1979 (ASNA), which is codified as 49 U.S.C. 47501-47510, set forth the foundation for the airport noise compatibility planning program outlined in 14 Code of Federal Regulations (CFR) Part 150 (see Section A.1.8). This act established the requirements for conducting noise compatibility planning and provided assistance to and funding for which airport operators could apply to undertake such planning.

A.1.5 Airport Noise and Capacity Act of 1990

The Airport Noise and Capacity Act of 1990 (ANCA) established two broad directives for the FAA: 1) to establish a method by which to review airport noise and access/use restrictions imposed by airport proprietors, and 2) to institute a program to phase-out Stage 2 aircraft over 75,000 lbs. by December 31, 1999, as defined by 14 CFR Part 36 (see Section A.1.6). To implement ANCA, the FAA amended 14 CFR Part 91 (see Section A.1.7) and issued 14 CFR Part 161 (see Section A.1.9).

A.1.6 14 CFR Part 36

Title 14, Part 36, of the CFR sets forth noise levels that are permitted for aircraft of various weights, engine number, and date of certification. Originally released in 1974 as a result of Congress' modification of the Federal Aviation Act of 1958 through the Noise Control Act of 1972, aircraft were divided into three classes, based on the amount of noise they produced at three specific noise measurement locations during certification testing. These classes (or stages) are:

Stage 1 – Includes the oldest and loudest aircraft, typically of the first generation of jets, designed before 1974, and having measured noise levels that exceed the standards set for the other classes of aircraft. This group included many of the first generation of jet aircraft used in passenger and cargo service, including the B-707, early B-727 and B-737 aircraft, and early DC-8s. Under 14 CFR Part 91, all such aircraft weighing more than 75,000 pounds were removed from the U.S. operating fleet by 1985, unless modified to meet Stage 2 noise standards.

Stage 2 – Includes aircraft that were type certified before November 15, 1975 that met noise levels defined by the FAA at takeoff, sideline, and approach measurement locations. The permissible amount of noise increased with the weight of the aircraft above 75,000 pounds and the number of engines. This category included many of the second-generation jet aircraft such as the B-727, B-737-200, and DC-9 that were extensively used in passenger and cargo service. Under 14 CFR Part 91, all such aircraft weighing more than 75,000 pounds were removed from the U.S. operating fleet by 2000, unless modified to meet Stage 3 noise standards. As of December 31, 2015, this requirement was extended to all aircraft with a maximum weight of 75,000 pounds or less operating in the contiguous United States.

Stage 3 – Includes aircraft that meet more stringent noise level requirements at takeoff, sideline, and approach measurement locations for their weight and engine number. This category includes a large percentage of business jet aircraft and all aircraft in passenger and cargo service that weigh more than 75,000 pounds.

Stage 4 – In July 2005, the FAA, through notice in the Federal Register, adopted by Final Rule for Stage 4 Aircraft Noise Standards. This includes all jet and transport-category airplanes with a maximum take-off weight of 12,500 pounds or more for which application of a new type design is submitted on or after January 1, 2006. The FAA's final Part 36 Stage 4 noise levels are a cumulative 10 EPNdB (effective perceived noise level in decibels) less than the current Stage 3 limits. These limits are based on the work of the International Civil Aviation Organization (ICAO), in which the FAA and the International Business Aviation Council are active members.

A.1.7 14 CFR Part 91

Title 14, Part 91 of the CFR as applied to noise, established schedules for phasing louder equipment out of the operating fleet of aircraft weighing according to Part 36 stage limits. The schedules called for all Stage 1 aircraft over 75,000 pounds to be removed from commercial fleets by 1982, with the exception of two engine aircraft in small city service, which were allowed to continue in service until 1985.

The schedule for the retirement of Stage 2 aircraft required the removal of all such aircraft over 75,000 pounds by the end of 1999, with interim retirement dates of 1994, 1996, and 1998 for the removal of portions of the Stage 2 fleet.

On July 2, 2013, the FAA issued a Final Rule which prohibits the operation in the contiguous United States of jet airplanes weighing 75,000 pounds or less that do not meet Stage 3 noise levels after December 31, 2015.[1]

The ICAO Committee on Aviation Environmental Protection continues to debate the merits of adopting a more stringent standard for new aircraft type designs. No action has been taken as of August 2020 to establish a phase-out schedule for Stage 3 aircraft in the United States.

A.1.8 14 CFR Part 150

Title 14, Part 150 of the CFR sets forth the standards under which a Part 150 Noise Compatibility Study is conducted. Notably, the preparation of a Noise Compatibility Program (NCP) under 14 CFR Part 150 is a voluntary action by an airport proprietor. The process of preparing the plan is intended to open/enhance lines of communication between the airport, its neighbors, and users. It is the only mechanism to provide for the mitigation of aircraft noise impacts on noise-sensitive surrounding areas that is not directly tied to airfield development or airspace utilization conducted subject to the rules for preparation of an Environmental Impact Statement (EIS) or Environmental Assessment (EA).

The Part 150 Program allows airport operators to voluntarily submit noise exposure maps (NEMs) and NCPs to the FAA for review and approval. An NCP sets forth the measures that an airport operator "has taken" or "has proposed" for the reduction of existing incompatible land uses and the prevention of additional incompatible land uses within the area covered by NEMs.

A.1.9 14 CFR Part 161

Title 14, Part 161 of the CFR was published in 1991, subsequent to passage of the ANCA. That act established the requirement and schedule for the phase-out of Stage 2 aircraft over 75,000 pounds. In return for that action, Congress severely restricted the ability of local communities to impose actions that would restrict the aircraft access to any airport. Different levels of requirements were established for voluntary restrictions, restrictions on Stage 2 aircraft, and restrictions on Stage 3 aircraft. These requirements are applicable to all aircraft except propeller-driven aircraft weighing less than 12,500 pounds, supersonic aircraft, and Stage 1 aircraft.

A.1.9.1 *Restrictive Agreements*

Subpart B of 14 CFR Part 161 sets forth requirements for the implementation of noise or access restriction on the operation of Stage 3 aircraft under an agreement between airport operators and all affected airport users. Before going into effect, notice of these proposed agreements must be published in local newspapers of area wide circulation, posted prominently at the airport, and sent directly to all regular airport users; the FAA; Federal, state, and local agencies with land use control authority; community groups and business organizations; and any aircraft operators that are known to be interested in providing service to the airport (new entrants). After this notification period, the agreement can be implemented if all current users and any new entrants proposing to serve the airport within 180 days sign on to the proposed restriction.

[1] Federal Aviation Administration, Final Rule: Adoption of Statutory Prohibition on the Operation of Jets Weighing 75,000 Pounds or Less That Are Not Stage 3 Noise Compliant, Federal Register Volume 78, Number 127 (Tuesday, July 2, 2013).

A.1.9.2 *Stage 3 Restrictions*

Subpart D of 14 CFR Part 161 establishes the requirements that an airport operator must follow in order to implement a noise or access restriction on Stage 3 aircraft, including a study and formal application package. The required Part 161 study must demonstrate "by substantial evidence that the statutory conditions are met." These six conditions, specified in ANCA and codified in 14 CFR Part 161 are:

- Condition 1: The restriction is reasonable, non-arbitrary, and non-discriminatory.
- Condition 2: The restriction does not create an undue burden on interstate or foreign commerce.
- Condition 3: The proposed restriction maintains safe and efficient use of the navigable airspace.
- Condition 4: The proposed restriction does not conflict with any existing Federal statute or regulation.
- Condition 5: The applicant has provided adequate opportunity for public comment on the proposed restriction.
- Condition 6: The proposed restriction does not create an undue burden on the national aviation system.[2]

The applicant must also prepare an EA or documentation supporting a categorical exclusion.[3]

After submission by an airport operator of a complete Part 161 application package, the FAA has 30 days to review it for completeness. Notice of the proposed restriction must be published by the FAA in the *Federal Register*. After reviewing the application and public comments, the FAA must issue a decision approving or disapproving the proposed restriction within 180 days after receipt of a complete application. This decision is a final decision of the FAA Administrator for purposes of judicial review.[4]

A.1.9.3 *Consequences of Failing to Comply with Part 161*

Subpart F of 14 CFR Part 161 describes the consequences of an airport operator's failure to comply with Part 161. The sanction provided for in Subpart F is the termination of the airport's eligibility to receive airport grant funds and to collect PFCs.[5] Most of Subpart F describes the process for notifying airport operators of apparent violations, dispute resolution, and implementation of the required sanctions.

A.1.10 Federal Interagency Committee on Noise

FICON was formed in 1990 to review specific elements of the assessment of airport noise impacts and to make recommendations regarding potential improvements. The FICON review focused primarily on the manner in which noise impacts are determined, including:

- Whether aircraft noise impacts are fundamentally different from other transportation noise impacts;
- The manner in which noise impacts are described;
- The extent of impacts outside of DNL 65 decibels (dB) that should be reviewed in a National Environmental Policy Act (NEPA) document;
- The range of FAA-controlled mitigation options (noise abatement and flight track procedures) analyzed; and

[2] 14 CFR Part 161, Sec. 161.305(e).
[3] 14 CRF Part 161, Sec. 161.305(c).
[4] 14 CFR Part 161, Sec. 161.313(b)(2).
[5] 14 CFR Part 161, Sec. 161.501-505.

- The relationship of the 14 CFR Part 150 process to the NEPA process; including ramifications to the NEPA process if they are separate, and exploration of the means by which the two processes can be handled to maximize benefits.

FICON determined that there are no new descriptors or metrics of sufficient scientific standing to substitute for the present DNL cumulative noise exposure metric. The methodology employing DNL as the noise exposure metric and appropriate dose-response relationships to determine noise impact is considered the proper one for civil and military aviation scenarios in the general vicinity of airports.

FICON recommended continued use of DNL as the principle means of assessing noise impacts and encouraged agency discretion in the use of supplemental noise analysis. The Committee also recommended continued research on the impact of aircraft noise, and recommended that "a standing federal interagency committee should be established to assist agencies in providing adequate forums for discussion of public and private sector proposals, identifying needed research, and in encouraging the conduct of research and development in these areas."

Federal Interagency Committee on Aviation Noise (FICAN)

The FICAN was formed in 1993 to fulfill the FICON recommendation. The following Federal agencies concerned with aviation noise, including those with policy roles, are represented on the Committee:

- Department of Defense
  - U.S. Air Force
  - U.S. Army
  - U.S. Navy
- Department of Interior
  - National Park Service
- Department of Transportation
  - Federal Aviation Administration
- Environmental Protection Agency
- National Aeronautics and Space Administration (NASA)
- Department of Housing and Urban Development

A.1.11 Federal Requirements to use DNL in Environmental Noise Studies

DNL is the standard metric used for environmental noise analysis in the United States. This practice originated with the USEPA's effort to comply with the Noise Control Act of 1972. The USEPA designated a task group to "consider the characterization of the impact of airport community noise and develop a community noise exposure measure."[6] The task group recommended using the DNL metric. The USEPA accepted the recommendation in 1974, based on the following considerations:

1. The measure is applicable to the evaluation of pervasive, long-term noise in various defined areas and under various conditions over long periods of time.
2. The measure correlates well with known effects of the noise environment on individuals and the public.

[6] Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety. U.S. Environmental Protection Agency, Office of Noise Abatement and Control. 1974, P. A-10.

3. The measure is simple, practical, and accurate.
4. Measurement equipment is commercially available.
5. The metric at a given location is predictable, within an acceptable tolerance, from knowledge of the physical events producing the noise.[7]

The Schultz Curve, which is depicted in **Exhibit A-1, *Schultz Curve***, was first published by T.J. Schultz in *Synthesis of Social Surveys on Noise Annoyance* in 1978. The curve relates specific DNL levels to the percent of people in a community whom those noise levels highly annoy. The Curve provided a widely-accepted dose-response relationship between cumulative environmental noise and annoyance. Like other Federal agencies that have established Federal land use guidelines for noise, FAA used the Schultz Curve, when it designated the DNL 65 dB contour as the cumulative noise exposure level above which residential land uses are not compatible without mitigation. At DNL 65 dBA, the Schultz Curve predicts that approximately 12.5 percent of the population will be highly annoyed.

Soon thereafter, the Department of Housing and Urban Development (HUD), Department of Defense, and the Veterans Administration adopted the use of the DNL.

At about the same time, the Acoustical Society of America developed a standard (ANSI S3.23-1980) which established DNL as the preferred metric for outdoor environments. This standard was reevaluated in 1990 and they reached the same conclusions regarding the use of DNL (ANSI S12.40-1990).

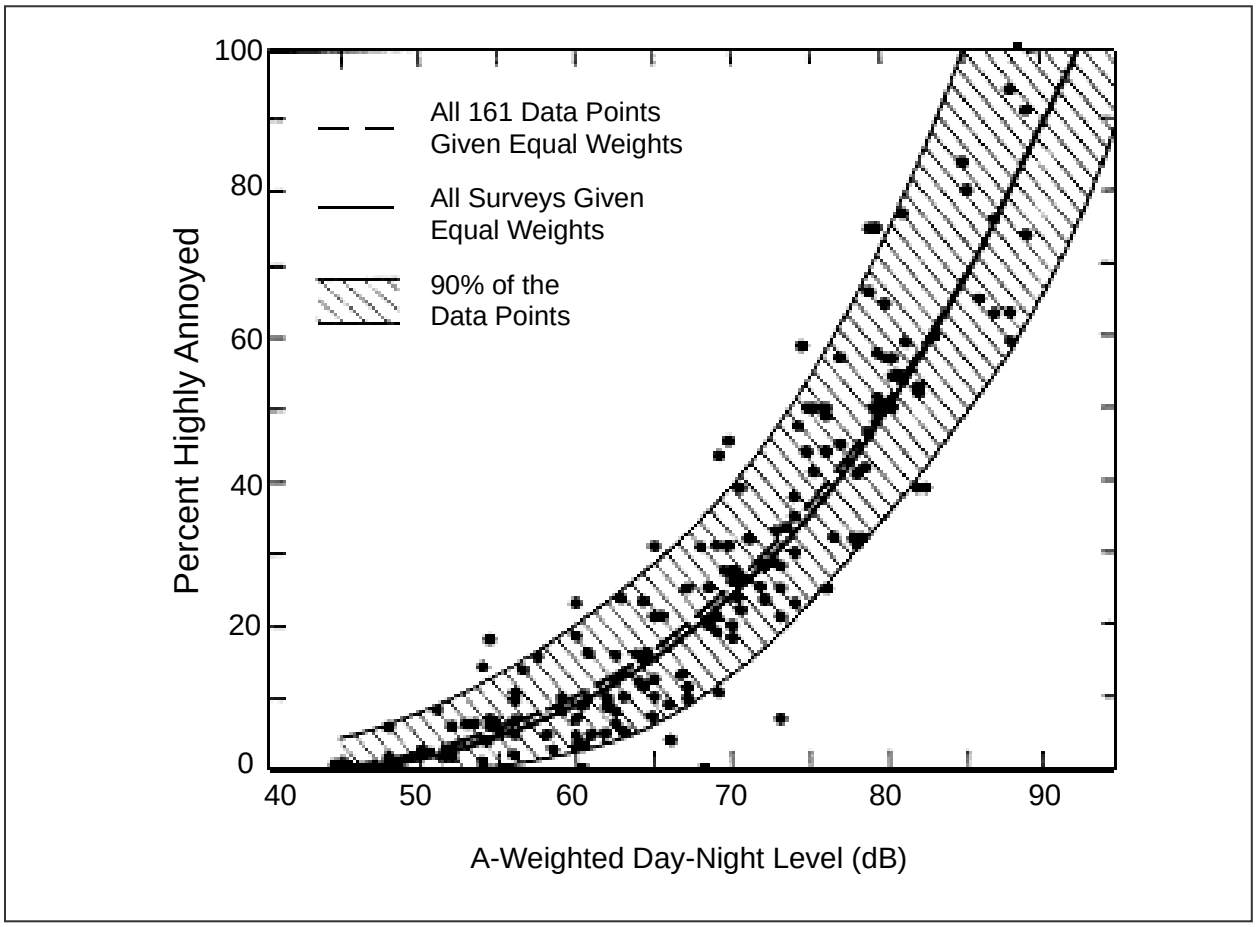
In 1980, the Federal Interagency Committee on Urban Noise (FICUN) met to consolidate Federal guidance on incorporating noise considerations in local land use planning. The committee selected DNL as the best noise metric for the purpose, thus endorsing the USEPA's earlier work and making it applicable to all Federal agencies.[8]

In response to the requirements of the ASNA Act of 1979 and the recommendations of FICUN and USEPA, the FAA established DNL in 1981 as the single metric for use in airport noise and land use compatibility planning. This decision was incorporated into the final rule implementing ASNA, 14 CFR Part 150, in 1985. Part 150 established the DNL as the noise metric for determining the exposure of individuals to aircraft noise and identified residential land uses as being normally compatible with noise levels below DNL 65 dBA.

In the early 1990s, Congress authorized the creation of a new interagency committee to study airport noise issues. The FICON was formed with membership from the USEPA, the FAA, the U.S. Air Force, the U.S. Navy, HUD, the Department of Veterans Affairs, and others. FICON concluded in its 1992 report that Federal agencies should "continue the use of the DNL metric as the principal means for describing long term noise exposure of civil and military aircraft operations."[9] FICON further concluded that there were no new sound descriptors of sufficient scientific standing to substitute for the DNL cumulative noise exposure metric."[10]

[7] Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety. U.S. Environmental Protection Agency, Office of Noise Abatement and Control. 1974, Pp. A-1–A-23.
[8] *Guidelines for Considering Noise in Land Use Planning and Control*. Federal Interagency Committee on Urban Noise (FICUN). 1980.
[9] *Federal Agency Review of Selected Airport Noise Analysis Issues*. Federal Interagency Committee on Noise (FICON). August 1992, Pp. 3-1.
[10] Federal Agency Review of Selected Airport Noise Analysis Issues, Technical Report, Volume 2. Federal Interagency Committee on Noise (Technical). August 1992, Pp. 2-3.

Exhibit A-1 Schultz Curve



In 1993, the FAA issued its *Report to Congress on Effects of Airport Noise*. Regarding DNL, the FAA stated, "Overall, the best measure of the social, economic, and health effects of airport noise on communities is the Day-Night Average Sound Level (DNL)."[11] According to this report, DNL 65 dBA "…as a criterion of significance, and of the land use compatibility guidelines in Part 150 is reasonable."[12] In April 2020, the FAA issued a report to Congress in accordance with section 188 in the 2018 FAA Reauthorization Act which stated that the DNL metric is the metric to be used for FAA decision-making.[13] The report further noted that other supplemental metrics could be used for informational purposes. Information regarding supplemental metrics can be found in Appendix C.

As part of FAA's ongoing research program on aircraft noise, the Agency conducted a nationwide survey regarding annoyance related to aircraft noise. The results of this survey, titled the Neighborhood Environmental Survey, were published in the Federal Register on January 13, 2021. Based on the survey, a new National Curve was created by combining the Survey responses from the question related to "Noise from Aircraft" with the modeled aircraft noise levels. Compared with the existing Schultz Curve, the new National Curve shows a substantial increase in the percentage of people who are highly annoyed by aircraft noise over the entire range of aircraft noise levels considered, including at lower noise levels.[14]

[11] *Report to Congress on Effects of Airport Noise*. Federal Aviation Administration. 1993, P. 1.
[12] *Report to Congress on Effects of Airport Noise*. Federal Aviation Administration. 1993, P. 13.
[13] *Report to Congress, FAA Reauthorization Act of 2018 (Pub. L. 115-254), Section 188 and Sec 173.* Federal Aviation Administration, 2020.
[14] Federal Aviation Administration, Neighborhood Environmental Survey, Online at: https://www.faa.gov/regulations_policies/policy_guidance/noise/survey/, Accessed on June 1, 2021.

A.2 Federal Laws and Policies Related to Noise/Land Use Compatibility

The FAA adopted land use compatibility guidelines relating types of land use to airport sound levels in 1985. These guidelines were promulgated in 14 CFR Part 150. These guidelines, reproduced here as **Table A-1, *Land Use Compatibility Guidelines – 14 CFR Part 150***, show the compatibility parameters for residential, public (schools, churches, nursing homes, hospitals, libraries), commercial, manufacturing and production, and recreational land uses.

The Part 150 guidelines are the basis for defining areas potentially eligible for Federal funding through the Airport Improvement Program (AIP). The *Airport Improvement Handbook* states, "The DNL 65 dB noise contour is the noise level at or above which certain land uses are not considered to be compatible (49 USC § 47502, as implemented by Table 1 of Appendix A in 14 CFR part 150). The converse is also true – because DNL 65 dB is the Federal threshold for considering certain land uses as compatible, noise-sensitive land uses located outside of the DNL 65 dB noise contour are not considered to be impacted by airport related noise. They are not eligible for mitigation funding unless a lower local standard is formally adopted."[15]

As shown in Table 4-1, all land uses within areas below 65 DNL are considered to be compatible with airport operations. Residential land uses are generally incompatible with noise levels above 65 DNL. In some areas, residential land use may be permitted in the 65 to 70 DNL with appropriate sound insulation measures implemented. This is done at the discretion of local communities. Schools and other public use facilities located between 65 and 75 DNL are generally incompatible without sound insulation. Above 75 DNL, schools, hospitals, nursing homes, and churches are considered incompatible land uses. The information presented in Table 4-1 is meant to act as a guideline. According to 14 CFR Part 150, "Adjustments or modifications of the descriptions of the land-use categories may be desirable after consideration of specific local conditions."[16]

[15] FAA, Order 5100.38D, Change 1, Appendix R-6. a, February 26, 2019
[16] 14 CFR Part 150, Part B Noise Exposure Map Development, Section A150.101 Noise contours and land usages, paragraph (c).

Table A-1 Land Use Compatibility Guidelines – 14 CFR Part 150

Yearly Day-Night Average Sound Level (DNL) in Decibels						
Land Use	**Below 65**	**65-70**	**70-75**	**75-80**	**80-85**	**Over 85**
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings	Y	N[1]	N[1]	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N[1]	N[1]	N[1]	N	N
PUBLIC USE						
Schools, hospitals, nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y[2]	Y[3]	Y[4]	N[4]
Parking	Y	Y	Y[2]	Y[3]	Y[4]	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail -- building materials, hardware, and farm equipment	Y	Y	Y[2]	Y[3]	Y[4]	N
Retail trade, general	Y	Y	25	30	N	N
Utilities	Y	Y	Y[2]	Y[3]	Y[4]	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing, general	Y	Y	Y[2]	Y[3]	Y[4]	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y[6]	Y[7]	Y[8]	Y[8]	Y[8]
Livestock farming and breeding	Y	Y[6]	Y[7]	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y	Y[5]	N[5]	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

Key to Table A-1

Y (Yes) Land use and related structures compatible without restrictions.
N (No) Land use and related structures are not compatible and should be prohibited.
NLR Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure
25, 30, 35Land use and related structures generally compatible; measures to achieve a NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.

Notes for Table 4-1
1. Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as five, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
2. Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
3. Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
4. Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
5. Land use compatible provided special sound reinforcement systems are installed.
6. Residential buildings require a NLR of 25 dB.
7. Residential buildings require a NLR of 30 dB.
8. Residential buildings not permitted.

Source: 14 CFR Part 150 Airport Noise Compatibility Planning, Appendix A, Table 1.

A.2.1 FAA Final Policy on Part 150 Noise Mitigation Measures

The FAA issued a final policy to establish a distinction between remedial and preventive noise mitigation measures proposed by airport operators and submitted for approval by the FAA under noise compatibility planning regulations. In the notice of final policy[17] effective October 1, 1998, the FAA stated the following:

- As of October 1, 1998, the FAA will approve under 14 CFR Part 150 only remedial noise mitigation measures for existing incompatible development and only preventative noise mitigation measures in areas of potential new incompatible development.
- The FAA will not approve remedial noise mitigation measures for new incompatible development that occurs in the vicinity of airports.
- The use of AIP funds will be affected to the extent that such used depends on approval under Part 150.

The Airport Noise Compatibility Planning Program (14 CFR Part 150) was established under the ASNA. The Part 150 program allows airport operators to submit NEMs and NCPs to the FAA voluntarily. According to the ASNA, an NCP sets forth the measures that an airport operator has taken or has proposed for the reduction of existing incompatible land uses and the prevention of additional incompatible land uses within the area covered by NEMs.

The ASNA embodies strong concepts of local initiative and flexibility. The submission of NEMs and NCPs is left to the discretion of local airport operators. Airport operators also may choose to submit NEMs without preparing and submitting an NCP. The types of measures that airport operators may include in an NCP are not limited by the ASNA, allowing airport operators substantial latitude to submit a broad array of measures—including innovative measures—that respond to local needs and circumstances.

The criteria for approval or disapproval of measures submitted in a Part 150 program are set forth in the ASNA. The ASNA directs the Federal approval of an NCP, except for measures relating to flight procedures: (1) if the program measures do not create an undue burden on interstate or foreign commerce; (2) if the program measures are reasonably consistent with the goal of reducing existing incompatible land uses and preventing the introduction of additional incompatible land uses; and (3) if the program provides for its revision if necessitated by the submission of a revised NEM. Failure to approve or disapprove an NCP within 180 days, except for measures relating to flight procedures, is deemed to be an approval under the ASNA.

[17] FAA Notice of Final Policy, October 1, 1998.

Finally, the ASNA sets forth criteria under which grants may be made to carry out noise compatibility projects, consistent with ASNA's overall deference to local initiative and flexibility.

The FAA is authorized, but not obligated, to fund projects via the AIP to carry out measures in an NCP that are not disapproved by the FAA. Such projects also may be funded with local Passenger Facility Charges (PFC) revenue upon the FAA's approval of an application filed by a public agency that owns or operates a commercial service airport, although the use of PFC revenue for such projects does not require an approved NCP under Part 150.

In establishing the airport noise compatibility planning program, which became embodied in 14 CFR Part 150, the ASNA did not change the legal authority of state and local governments to control the uses of land within their jurisdictions. Public controls on the use of land are commonly exercised by zoning. Zoning is a power reserved to the states under the U.S. Constitution. It is an exercise of the police powers of the states that designates the uses permitted on each parcel of land. This power is usually delegated in states enabling legislation to local levels of government.

Many local land use control authorities (cities, counties, etc.) have not adopted zoning ordinances or other controls to prevent incompatible development (primarily residential) within the noise impact areas of airports. An airport noise impact area, identified within noise contours on an NEM, may extend over a number of different local jurisdictions that individually control land uses.

While airport operators have included measures in NCPs submitted under Part 150 to prevent the development of new incompatible land uses through zoning and other controls under the authorities of appropriate local jurisdictions, success in implementing these measures has been mixed.

One or more of the factors hindering effective land use controls may be of sufficient importance to preclude some jurisdictions from following through on the land use recommendations of an airport's Part 150 NCP. When either an airport sponsor's or a non-airport sponsor's jurisdiction allows additional incompatible development within the airport noise impact area. This can, in turn, result in noise problems for the airport operator in the form of inverse condemnation or noise nuisance lawsuits, public opposition to proposals by the airport operator to expand the airport's capacity, and local political pressure for airport operational and capacity limitations to reduce noise. Some airport operators have taken the position that they will not provide any financial assistance to mitigate aviation noise for new incompatible development. Other airport operators have determined that it is a practical necessity for them to include at least some new residential areas within their noise assistance programs to mitigate noise impacts that they were unable to prevent in the first place. Over a relatively short period of time, the distinctions blur between what is "new" and what is "existing" residential development with respect to airport noise issues.

Airport operators currently may include new incompatible land uses, as well as existing incompatible land uses, within their Part 150 NCPs and recommend that remedial noise mitigation measures--usually either property acquisition or noise insulation--be applied to both situations. These measures have been considered to qualify for approval by the FAA under 49 USC 47504 and 14 CFR Part 150. The Part 150 approval enables noise mitigation measures to be considered for Federal funding under the AIP, although it does not guarantee that Federal funds will be provided.

Final Policy

Therefore, as of October 1, 1998, the FAA will approve remedial noise mitigation measures under Part 150 only for incompatible development which exists as of that date. Incompatible development that potentially may occur on or after October 1, 1998, may only be addressed in Part 150 programs with preventative noise mitigation measures. This policy will affect the use of AIP funds to the extent that such funding is dependent on approval under Part 150.

Approval of remedial noise mitigation measures for bypassed lots or additions to existing structures within noise impacted neighborhoods, additions to existing noise impacted schools or other community facilities required by demographic changes within their service areas, and formerly noise compatible uses that have been rendered incompatible as a result of airport expansion or changes in airport operations, and other reasonable exceptions to this policy on similar grounds must be justified by airport operators in submittals to the FAA and will be considered by the FAA on a case-by-case basis. This policy does not affect AIP funding for noise mitigation projects that do not require Part 150 approval, that can be funded with PFC revenue, or that are included in FAA-approved environmental documents for airport development.

A.2.2 FAA Airport Improvement Program Handbook

Airport Improvement Program (AIP) Handbook[18] provides guidance and sets forth policy and procedures used in the administration of the AIP. Appendix R, *Noise Compatibility Planning/Projects*, provides guidance and eligibility requirements for airport noise mitigation programs. The following sections provide the general steps for determining eligibility for mitigation under AIP guidelines.

A.2.2.1 *General Eligibility Requirements*

Table A-1, Land Use Compatibility Guidelines – 14 CFR Part 150, defines the requirements for determining when various land uses are noncompatible with aircraft noise, and therefore potentially eligible for AIP funding. The DNL 65 dB noise contour is the noise level at or above which certain land uses are not considered to be compatible (49 USC § 47502, as defined in Table A-1). The converse is also true – because DNL 65 dB is the Federal threshold for considering certain land uses as compatible, noise-sensitive land uses located outside of the DNL 65 dB noise contour are not considered to be impacted by airport related noise. They are not eligible for mitigation funding unless a lower local standard is formally adopted.

A.2.2.2 *Interior Noise Level Requirements*

The 45 dB standard has been adopted by the FAA for interior noise. This is based on 46 Federal Register 8316 (January 26, 1981), which established the interim rule for 14 CFR part 150 and included specific requirements regarding interior noise level. This was further clarified in 1992 by the Federal Interagency Committee on Noise (FICON) findings of 45 dB to be the interior noise level that will accommodate indoor conversations or sleep. A noise-impacted noncompatible structure must be experiencing existing interior noise levels that are 45 dB or greater with the windows closed to be considered eligible. For residences, the calculation of interior noise level must be based on the average noise level of only the habitable rooms (e.g. living, sleeping, and kitchen areas). For schools, the interior noise level during school hours should be calculated for determination of eligibility. Eligibility for noise insulation is limited to classrooms, libraries, fixed seat auditoriums, and educators' offices.

A.2.2.3 *Block Rounding*

Block rounding refers to expanding the noise mitigation program area beyond the limits of the 65 DNL noise contour to a logical breakpoint (such as a neighborhood boundary, significant arterial surface street, highway, river, other physical or natural barrier or feature). The FAA will review a request for block rounding under a noise mitigation program (or environmental study). If approved under block rounding, the property must meet the interior noise level requirements described in Section A.2.2.2.

[18] U.S. Department of Transportation, Federal Aviation Administration, Order 5100.38D, Change 1, February 26, 2019.

A.2.2.4 *Neighborhood Equity*

A sponsor may consider the use of neighborhood equity when residences in the eligible noise contour threshold that do not meet the interior noise level requirements are scattered among residences that do meet the interior noise level criteria. If sponsor proposes to use neighborhood equity provisions, the FAA has the option to approve this request under the following circumstances.

- The residence must be in the eligible noise contour threshold
- The sponsor must develop a separate neighborhood equity package limited to improvements such as caulking, weather stripping, installation of storm doors or ventilation packages. The FAA must not approve the use of the standard noise insulation package for neighborhood equity residences.
- Per FAA policy, approval should not exceed more than 10% of the residences in the neighborhood, or 20 residences in a phase of the noise insulation program, whichever is less.
- In extremely rare cases, the FAA may determine that the program will benefit by providing noise equity packages to more than the 10% or 20 residence limit.
- The sponsor must provide the FAA, Airports District Office (ADO) with a complete list of the specific residences (by address) that are proposed for neighborhood equity.
- The sponsor must provide the ADO with detailed information comparing the cost of the proposed neighborhood equity package with the cost of a standard noise insulation package.
- The ADO must review and approve or disapprove the sponsor's proposed neighborhood equity package. In their determination, the ADO must ensure that the use of the minimal neighborhood equity packages on non-eligible residences is required to allow successful completion of the overall noise insulation program in the neighborhood, thus allowing these residences to be noise insulated within the guidelines of AIP eligibility. The ADO must document the determination and place a copy of the determination in the grant file.

A.2.2.5 *Pre- and Post-Testing Criteria for Noise Insulation Projects*

The AIP Handbook sets forth requirements for testing potentially eligible structures to determine if the interior noise level requirements are met. This guidance includes requirements for testing methodology, equipment, and the determination of an adequate sample size, which could impact program startup and implementation costs and funding reimbursement.

A.2.2.6 *Disposal of Excess/Unneeded AIP Funded Land*

Section 5-68 of the AIP Handbook sets forth requirements for disposal of land acquired under an airport NCP, commonly referred to as "noise land." 49 USC § 47107(c)(2) requires a sponsor to promptly dispose of AIP funded land when the land is no longer needed for airport purposes. In this specific case, airport purpose includes land needed for an existing or future aeronautical purpose (including runway protection zone) or land that serves as a noise buffer. If it is determined that the land is no longer need for these purposes, the airport sponsor has the choice of either selling or keeping the land for non-airport purposes. In either case, the airport sponsor must use the Federal share of the fair market value on projects in the following order of precedence:

1. Reinvestment in an approved noise compatibility project
2. Reinvestment in an approved project that is eligible for funding under 49 USC § 47117(e)
3. Reinvestment in all other approved airport development projects at the airport
4. Transfer to a sponsor of another public airport for a noise compatibility project at the other airport
5. Repay the proceeds as directed by the FAA Office of Finance and Management

A.2.3 Program Guidance Letters

Program Guidance Letters are issued to update or clarify elements of the AIP Handbook. One current Program Guidance Letter (PGL), related to changes outlined in the FAA Reauthorization Act of 2018 dealing with noise and environmental issues is R-PGL 19-06.

A.2.3.1 *Reauthorization Program Guidance Letter (R-PGL) 19-06*

This Reauthorization Program Guidance Letter (R-PGL) 19-06 explains and implements provisions in the FAA Reauthorization Act of 2018 (the 2018 Act) (P.L.115-254) that impact environmental and noise programs.

Section 49 U.S.C. 47503(b) requires airport operators with noise exposure maps to submit a revised map if a change, which is not reflected in either the existing conditions map or forecast map currently on file with the FAA, in the operation of the airport:

1. Establishes a substantial new noncompatible use; or
2. Would significantly reduce noise over existing noncompatible uses.

Section 174 amends 49 U.S.C. 47503(b) by requiring submission of an updated noise exposure map only if the relevant change occurs during:

1. The forecast period of the applicable noise exposure map; or
2. The implementation period of the airport operator's noise compatibility program.

This provision applies only to airport sponsors that have a noise exposure map on file with the FAA.

Appendix B - Noise Measurements and Complaints

This Part 150 Noise Compatibility Study included data collection related to measured aircraft noise levels and community complaints at the John Glenn Columbus International Airport (CMH or Airport). This appendix provides the results of a temporary field noise measurement program that was conducted to provide actual noise data for informational purposes useful for the development of noise contour modeling. Data collection also included analyzing long-term noise measurement data and reviewing complaints about aircraft noise documented by the Columbus Regional Airport Authority (CRAA) Noise Management Office.

B.1 Noise Measurement Program

A field noise measurement program was conducted the week of November 10, 2019 at CMH. The field noise measurement program was conducted in accordance with 14 C.F.R. Part 150 guidelines as provided in Section A150.5. Sound level meters were deployed at 30 locations around CMH, including residential areas and public locations, to measure noise from aircraft operations.

Measurements made for short periods of time are unique to that one period, and may not represent the average of the events that would occur at that location over a longer period of time. The relationship between field measurements and computer-modeled average noise levels is comparable to that between a book and its cover. While the cover (single-event measurements) may indicate something of the character of a book, and receive inordinate attention based on its color or graphics, the total story (average noise level) is in all the words that constitute the story. It is on the total story that the critic makes his assessment. In other words, the modeling process simulates overall average-annual conditions (the book) while field measurements (the cover) reflect only a small part of the whole story and should not be too heavily relied upon when conducting a noise analysis.

Aircraft noise measurements concentrated on the collection of a variety of single overflight noise information, with emphasis on the noise generated by air carrier aircraft during arrival and departure east and west of the Airport. Measurements occurred during all times that the Airport was operating.

B.1.1 Field Noise Measurement Equipment

State of the art equipment used in this program included the Larson Davis 824 and LxT sound level meters. These are Class I Precision Sound Level Meters (as defined by American National Standards Institute (ANSI) and International Electrotechnical Commission (IEC)). The equipment was calibrated in compliance with manufacturer's procedures. Microphones and recording equipment were of the highest quality and capable of recording and calculating the various noise metrics. The equipment settings included the “A” frequency weighting, filter characteristics, and the “slow response” characteristics. The instrumentation that was used for collecting short-term and long-term measurements are listed in **Table B-1**.

Table B-1 Acoustical Measurement Instrumentation

Sound Level Meter	Microphone	Pre-amp
Larson Davis LxT1 Sound Level Meter with Windscreen	377B02	PRMLXT
Larson Davis 824 Sound Level Meter with Windscreen	377B02	PRM902

B.1.2 Field Noise Measurement Procedures

Aircraft noise levels were recorded using the equipment indicated in Table B-1 for each of the 30 short-term sites. Radar data was obtained from the Airport flight tracking system to correspond to the times of measurement. The noise-measurement program was designed to provide a sampling of single events throughout the study area. It was not designed to record cumulative noise levels. The sound level meters were attended while active to ensure that only aircraft noise events were recorded, or to note instances where a non-aircraft noise event was recorded simultaneously with an aircraft noise event. The field noise measurement procedure required the operator to enable the noise monitor when an aircraft noise event first became audible and continue monitoring that event until the noise level receded back to ambient levels, usually lasting a duration of 30-90 seconds. After the event, the operator recorded the average noise level (Leq), the sound exposure level (SEL), the event duration, and the maximum sound level (Lmax). Other event information, such as aircraft type and operational characteristics, was also annotated, as available. Ambient noise levels, without aircraft noise or intermittent community noise, were recorded at each site.

The short-term field noise measurement program provided for the collection of a large number of single-event measurements at a variety of locations throughout the community at distances ranging from several hundred feet to several miles between the aircraft and the monitoring site. This information, when correlated with the radar data and operating schedules, allowed for a comparison to the determination of applicable noise curves and performance characteristics within the Aviation Environmental Design Tool (AEDT) database for the most significant aircraft and operators. **Section B.1.5** discusses the analysis of short-term noise measurement data and comparison to AEDT aircraft profiles based on the results of the noise measurement data correlation and further investigation of average aircraft weights upon departure.

B.1.3 Field Noise Measurement Sites

Noise measurements were taken at 30 short-term sites. These short-term field noise measurement sites were chosen based on their proximity to the Airport and the existing permanent noise monitoring terminals (NMTs), the flow of aircraft operations during the measurement program, and areas of past noise concerns. Sites were also screened on the basis of ambient noise level (or more specifically, the absence of loud ambient noise such as vehicular traffic). Specific selection criteria included the following:

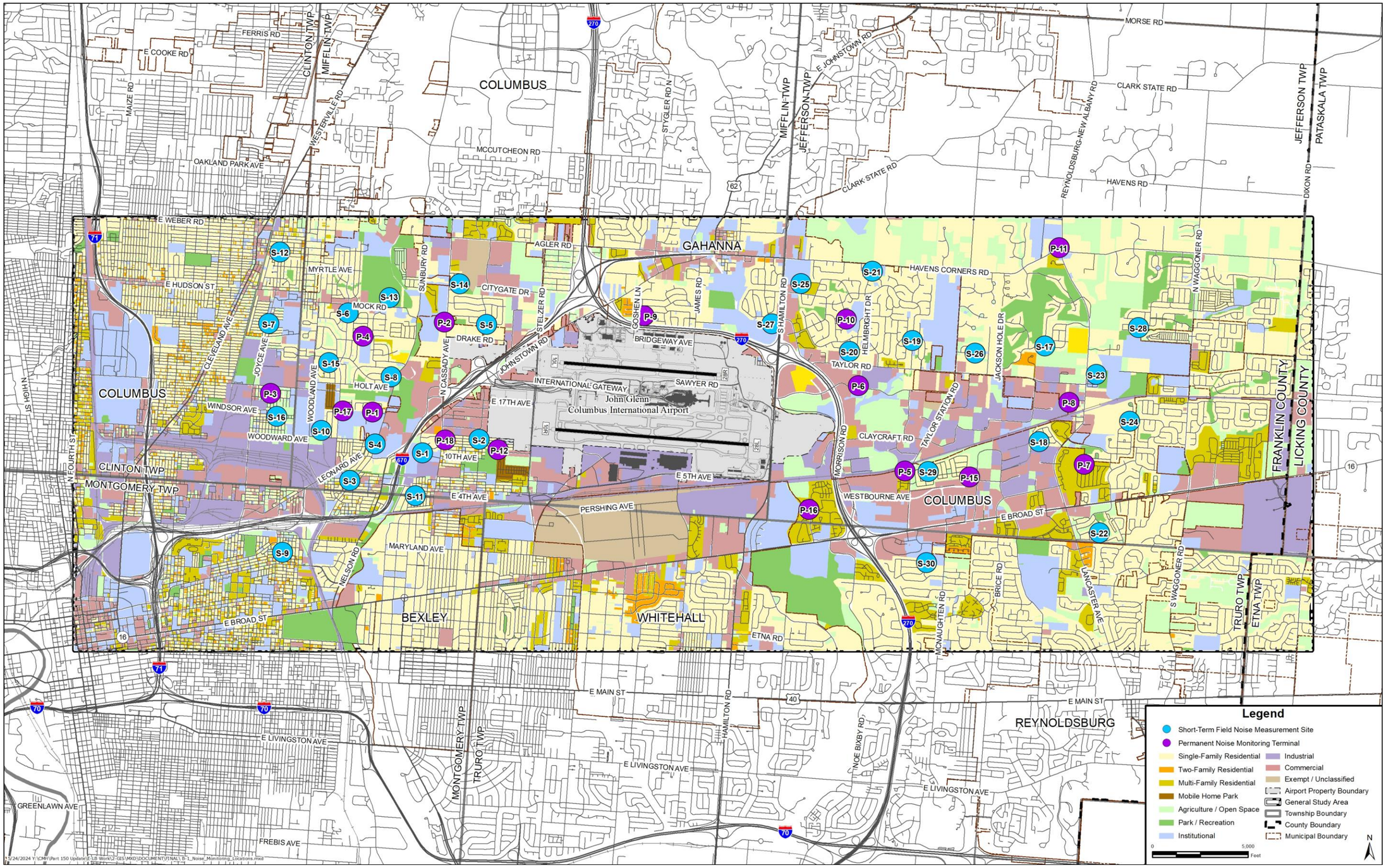
- Emphasis on areas of aircraft overflight based on radar data;
- Sampling of both arrivals and departures of typical aircraft operations;
- Screening of each site for local noise sources or unusual terrain characteristics, which could affect measurements;
- Location in or near areas from which complaints about aircraft noise were received; and
- Location where there are concentrations of residential development.

While there are numerous locations available for monitoring, the selected sites fulfill the above criteria and provide a representative sampling of the varying aircraft noise conditions in the vicinity of the Airport. In addition to the short-term measurement program, the CRAA maintains a permanent noise monitoring system

which includes 16 permanent NMTs located at various sites around CMH. **Exhibit B-1** illustrates the locations of both the short-term field noise measurement sites and the NMT locations. **Table B-2** lists the 30 short-term field noise measurement sites. More information about the NMT data collection is included in **Section B.3**.

This page intentionally left blank

Exhibit B-1 Noise Measurement Sites



This page intentionally left blank

Table B-2 Field Noise Measurement Sites

Site Number	Location
S-1	North Cassady Avenue near Summit Trace
S-2	E 13th Ave & Rarig Ave
S-3	E 5th Avenue & Sunbury Road
S-4	Sunbury Road near Woodward Avenue
S-5	Lone Spruce Road & Mountain Oak Road
S-6	Delavan Drive & Brentnell Avenue
S-7	Joyce Avenue & Maynard Avenue
S-8	Thames Drive north of Argyle Drive
S-9	Parkwood Ave & Pembroke Ave
S-10	Eastlawn Cemetery
S-11	Margaret Street & Drexel Avenue
S-12	Joyce Ave & Genessee Avenue
S-13	Mock Park - Mock Road & Bar Harbor Road
S-14	Baylor Avenue & Pepper Street
S-15	Marina Drive west of Toni Street
S-16	American Addition Park
S-17	Poppy Hills Drive & Keystone Ranch Court
S-18	Onyx Bluff Lane west of Stone Shadow Drive
S-19	Rice Avenue & Spruce Hill Drive
S-20	Hunters Run
S-21	Tamara Drive & Helmbright Drive
S-22	Serenoa Dr & Endora St
S-23	Olde Quarry Park
S-24	Sherridon Drive & Streamwater Drive
S-25	Meadow Green Circle
S-26	Estate View Drive east of Taylor Station Road
S-27	Shepherd Church of the Nazarene
S-28	Sand Bar Drive south of Headwater Drive
S-29	Lakes at Taylor Crossing Subdivision
S-30	Forestview Drive & Revere Road

B.1.4 Weather Information

The field noise measurement program was conducted for approximately one hour at each site during the week of November 10, 2019. The weather during the measurement period ranged from clear skies to rainy/overcast conditions. Field noise measurement collection was suspended during periods of heavy rain. Wind conditions dictated the use of west flow for the duration of the measurement period. When the Airport operates in west flow, aircraft arrive from the east heading west and depart to the west on Runways 28L and 28R.

B.1.5 Short-Term Noise Measurement Results Summary

The noise measurement process was designed to monitor the noise levels of a representative mix of aircraft operations at CMH. The noise measurement program recorded a wide range of noise exposure levels from aircraft activity within the airport environs. Some of the noise events collected at the measurement sites were produced by non-aircraft, e.g., cars, people, pets, wildlife, etc. However, at each site, the majority of noise events were produced by aircraft operations based on observations and aircraft radar data correlation. The measured noise levels from departing aircraft tended to produce SEL and peak decibel (dB) levels several dB higher than those of arriving aircraft. This difference is caused by two characteristics of the separate operations. First, exposure to noise above the background levels from arriving aircraft is typically shorter than from departing aircraft, resulting in less cumulative energy to be factored into the SEL exposure level. Second, the power settings used during approach are less than those necessary to climb during the takeoff, resulting in lower sound levels that are several dB lower than measured at similar locations during departure.

An evaluation of the SEL and peak (Lmax) levels measured at the various locations indicates that the SEL always measured several dB louder than the Lmax. The SEL values typically ranged between 5 to 15 dB higher than the Lmax level during each event. This is due to the calculation of the SEL metric which reports the total noise energy averaged over a one second period. Therefore, events that last more than one second will have a higher SEL because the acoustical energy is “compressed” into a one-second period.

Due to the wind conditions at the time of the noise measurement program, measurements taken to the west of the Airport primarily recorded departure operations; whereas measurements taken on the east side of the Airport primarily recorded arrivals. Measurements recorded to the west of the Airport in the City of Columbus, Clinton Township and Mifflin Township resulted in Lmax noise levels ranging from the middle 69.5 to 84.2 dB. To the east in Columbus, Gahanna, Jefferson Township and Truro Township, Lmax noise levels were recorded ranging from 54.0 to 80.7 dB.

The loudest aircraft event recorded was an Embraer E-170 departure. Other loud aircraft monitored included McDonnell-Douglas MD-90 series aircraft and Boeing 737-700 and 737-800 series aircraft. **Table B-3** provides a summary of the measurement data collection.

Table B-3 Short Term Field Noise Measurement Program Summary

Site Number	Location	Ambient Noise Level (dB)	Date Monitored	Time Monitored	Type of Events	Number of Events	Aircraft SEL Range	Lmax (loudest noise event)	Loudest aircraft
S-1	North Cassady near Summit Trace	47.4	11/12/2019	9:11am – 10:11am	Departures	21	69.0 - 87.2	78.1	Boeing 737-700
S-2	E 13th Ave & Rarig Avenue	47.9	11/12/2019	10:32am – 11:32am	Departures	8	76.0 - 91.2	83.0	Boeing 737-700
S-3	E 5th Avenue & Sunbury Road	57.1	11/11/2019	12:15pm – 1:15pm	Arrivals & Departures	11	71.9 - 86.1	84.2	Embraer E-175 LR
S-4	1095 Sunbury Road	47.2	11/12/2019	12:15pm – 1:15pm	Departures	10	69.3 - 88.4	79.1	Boeing 737-800
S-5	Lone Spruce Rd & Mountain Oak Road	44.1	11/12/2019	9:00am – 10:00am	Arrivals & Departures	21	63.9 - 90.4	80.0	Boeing 737-800
S-6	Delavan & Brentnell	61.6	11/12/2019	12:30pm – 1:30pm	Arrivals & Departures	10	73.0 - 87.7	82.2	Embraer E-175 LR
S-7	Joyce Avenue & Maynard Avenue	51.7	11/13/2019	11:45am – 12:45pm	Arrivals & Departures	10	71.1 - 86.6	77.2	Boeing 737-900
S-8	Thames Drive north of Argyle Drive	56.6	11/12/2019	10:30am – 11:30am	Arrivals & Departures	12	63.9 - 90.1	80.5	Boeing 737-900
S-9	Parkwood Ave & Pembroke Ave	48.8	11/11/2019	12:50pm – 1:50pm	Arrivals & Departures	7	54.5 - 79.1	75.7	Embraer E-175 LR
S-10	Eastlawn Cemetery	46.4	11/11/2019	10:58am – 11:58am	Departures	11	64.3 - 88.1	80.7	Boeing 737-800
S-11	Margaret Street & Drexel Ave	56.3	11/11/2019	3:25pm – 4:25pm	Departures	6	68.7 - 78.3	72.0	Cessna 525
S-12	Joyce Ave & Genessee Ave	49.3	11/11/2019	12:52pm – 1:52pm	Departures	12	64.5 - 85.9	77.3	Embraer E-175 LR
S-13	Mock Park - Mock Road & Bar Harbor Road	44.6	11/11/2019	2:02pm – 3:02pm	Departures	11	66.7 - 86.4	76.5	McDonnell-Douglas MD-90
S-14	Baylor Avenue & Pepper Street	50.3	11/11/2019	3:22pm – 4:22pm	Departures	5	68.4 - 85.9	69.5	Bombardier CRJ-900
S-15	Marina Drive west of Toni Street	45.5	11/12/2019	6:10am – 7:10am	Arrivals & Departures	14	45.6 - 86.8	79.1	Embraer E-175
S-16	American Addition Park	42.1	11/12/2019	6:20am – 7:20am	Departures	20	38.2 - 84.9	77.9	Boeing 737-800

Table B-3 Short Term Field Noise Measurement Program Summary *(continued)*

Site Number	Location	Ambient Noise Level (dB)	Date Monitored	Time Monitored	Type of Events	Number of Events	Aircraft SEL Range	Lmax (loudest noise event)	Loudest aircraft
S-17	Poppy Hills Drive & Keystone Ranch Court	45.4	11/11/2019	4:10pm – 5:10pm	Arrivals	6	64.5 - 73.5	63.9	Embraer E-170
S-18	Onyx Bluff Lane west of Stone Shadow Drive	45.8	11/12/2019	2:45pm – 3:45pm	Arrivals	12	62.8 – 83.3	74.7	Boeing 737-800
S-19	Rice Avenue & Spruce Hill Drive	42.1	11/12/2019	1:58pm – 2:58pm	Arrivals & Departures	12	61.5 – 86.5	80.0	Embraer E-175 LR
S-20	Hunters Run	45.6	11/12/2019	3:00pm – 4:00pm	Arrivals	7	62.5 – 75.6	74.9	Hawker 800
S-21	Tamara Drive & Helmbright Drive	43.8	11/13/2019	9:20am – 10:20am	Arrivals	8	52.0 – 62.8	54.0	Embraer E-175
S-22	Serenoa Dr & Endora St	54.0	11/13/2019	1:30pm – 2:30pm	Arrivals & Departures	12	47.6 – 79.4	74.6	Embraer E-175 LR
S-23	Olde Quarry Park	41.4	11/11/2019	12:50 PM – 1:59 PM	Arrivals	8	67.0 - 78.9	67.5	McDonnell Douglas MD90
S-24	Sherridon Drive & Streamwater Drive	38.7	11/13/2019	10:43am – 11:43am	Arrivals	14	57.6 – 78.9	73.3	Bombardier CRJ-701
S-25	Meadow Green Circle	38.4	11/13/2019	9:00am – 10:00am	Arrivals & Departures	16	42.1 – 77.7	71.5	Bombardier CRJ-200
S-26	Estate View Drive east of Taylor Station Road	48.8	11/12/2019	3:10pm – 4:10pm	Arrivals & Departures	13	52.5 – 80.9	75.7	Bombardier CRJ-701
S-27	Shepherd Church of the Nazarene	48.2	11/13/2019	12:02pm – 1:02pm	Arrivals	6	66.0 – 71.9	65.2	Boeing 737-700
S-28	Sand Bar Drive south of Headwater Drive	34.6	11/13/2019	1:10pm – 2:10pm	Arrivals	10	53.7 – 68.0	68.8	Cessna 560 Citation Excel
S-29	Lakes at Taylor Crossing Subdivision	42.8	11/12/2019	9:00pm – 10:00pm	Arrivals	11	59.0 – 86.9	80.7	Boeing 737-800
S-30	Forestview Drive & Revere Road	44.0	11/13/2019	10:16am – 11:16am	Arrivals & Departures	11	63.3 – 72.9	66.2	Airbus A319

Source: Landrum & Brown, 2019.

B.2 Permanent Noise Monitoring System

The CRAA maintains a permanent noise monitoring system at CMH which includes 16 permanent noise monitors (NMTs) located at various sites to the north, south, east, and west of the Airport. The locations of the NMTs are shown on Exhibit B-1. The NMTs collect noise data 24 hours a day, seven days a week and that data is transmitted to the Airport Noise and Operations Monitoring System (ANOMS) which correlates noise data to aircraft operational data. This data is used to prepare monthly and annual noise reports for each of the NMT locations using the average day-night sound level (DNL) metric. The reports provide the number of noise events, the number of hourly summaries, airport DNL, community DNL, and total DNL for each NMT location.

Table B-4 shows the recorded aircraft DNL compared to the AEDT modeled DNL for the Existing (2024) Baseline period for each of the 16 monitoring sites.[19] The measured noise levels shows the average annual DNL for the Existing (2024) Baseline period. The Modeled DNL presents the DNL levels calculated by the AEDT for the Existing (2024) Baseline condition.

Table B-4 Noise Levels at Permanent Noise Monitor Sites

Monitor Number	Location	Measured DNL	Modeled DNL	Difference
P-1	Ohio Dominican University	61.7	62.4	0.7
P-2	Columbus School for Girls	60.6	59.8	-0.8
P-3	New Tabernacle Church	58.9	59.6	0.7
P-4	South Mifflin Elementary	60.4	60.3	-0.1
P-5	Oak Alley	58.5	61.1	2.6
P-6	AEP Business Park	62.5	63.0	0.5
P-7	McNeill Farms Apartment Complex	58.7	60.6	1.9
P-8	Blacklick Industrial Park	57.9	58.3	0.4
P-9	Goshen Lane Elementary	55.2	55.5	0.3
P-10	Gahanna Middle School South	49.9	51.5	1.6
P-11	Blacklick Elementary	42.7	44.3	1.6
P-12	Krumm Park	61.3	62.6	1.3
P-15	Lakes at Taylor Station Subdivision	58.4	60.2	1.8
P-16	Cardinal Park Apartments	50.6	54.2	3.6
P-17	Brentnell Recreation Center	60.9	61.6	0.7
P-18	13th Avenue	61.1	62.1	1.0
Average		59.3	60.1	0.8

Source: CMH Airport Noise and Operations Management System.
Note: Permanent noise monitoring terminals 13 and 14 are located at Rickenbacker International Airport and are not listed in the above table.

[19] The Existing (2024) Baseline period for noise monitoring is September 1, 2019 through August 31, 2019.

The comparison of measured to modeled noise in Table B-5 shows that at 14 of the 16 permanent noise monitor locations, the AEDT modeled noise levels were within 2.0 dB of the monitored noise levels at each of the locations.

The average noise level across all of the sites was modeled to be 60.1 DNL, while the average measured noise level was 59.3 DNL, for a difference of 0.8 dB. Because a difference of 1.5 dB is generally imperceptible to the human ear, it was determined that the modeled and monitored noise levels are within an acceptable tolerance.

The average noise level across all of the sites was modeled to be 60.1 DNL, while the average measured noise level was 59.3 DNL. The average difference between all the sites was +0.8 dB, meaning that overall the noise model was predicting higher levels than the measurement data. Because a difference of less than 3 dB is generally imperceptible to the human ear outside of laboratory settings, it was determined that the modeled and monitored noise levels are within an acceptable tolerance. It is not expected that the modeled DNL and the measured DNL levels will match exactly. The difference in measured and AEDT modeled noise levels can be attributed to various factors including the influence of non-aircraft (background) noise sources on the measurement data which can fluctuate from day to day and from site to site.

B.3 Comparison of Flight Profiles

The AEDT includes standard flight procedure data for each aircraft that represents each phase of flight to or from an airport. Information related to aircraft speed, altitude, thrust settings, flap settings, and distance are available and used by the AEDT to calculate noise levels on the ground. Standard aircraft departure profiles are supplied from the runway (field elevation) up to 10,000 feet above field elevation (AFE). Aircraft arrival profiles are supplied from 6,000 feet AFE down to the runway including the application of reverse thrust and rollout. The Federal Aviation Administration (FAA) requires that these standard arrival and departure profiles be used unless there is evidence that they are not applicable.

The AEDT uses the distance of flight as a surrogate for assigning departure profiles that determine aircraft weight, as well as speed, thrust, and altitude during different stages of flight. The AEDT groups trip lengths into eleven categories; these categories are:

Category	Stage Length
1	0-500 nautical miles
2	500-1000 nautical miles
3	1000-1500 nautical miles
4	1500-2500 nautical miles
5	2500-3500 nautical miles
6	3500-4500 nautical miles
7	4500-5500 nautical miles
8	5500-6500 nautical miles
9	6501-7500 nautical miles
10	7501-8500 nautical miles
11	8500+ nautical miles

A comparison of measured noise levels to AEDT modeled noise levels was conducted to verify the standard flight profile input data into the AEDT is consistent with actual conditions. For this analysis, measured noise events were collected from the NMTs closest to the departure corridors. Noise levels from single aircraft overflight events were correlated to radar data to determine the aircraft type that triggered the noise event. Average measured noise levels for the most common aircraft types at CMH were compared to modeled noise levels produced by AEDT at the same locations as the NMTs.

A comparison of measured to modeled noise levels was conducted for the most common aircraft at CMH. **Table B-5** presents comparison of the average measured and AEDT modeled noise levels from the noise measurement program. The modeled noise level represents the AEDT's predicted noise level for each representative aircraft type. As shown in Table B-4, the difference between the measured and modeled DNL levels ranged from -2.8 dB to +1.9 dB. The minimum change in the sound level of individual events that an average human ear can detect outside of controlled laboratory settings is about 3 dB.[20] A difference below that is generally imperceptible to the human ear in non-laboratory settings and is considered within the range of acceptable tolerance. Of the individual aircraft types that were compared, all had a difference between the measured and modeled noise levels of less than 3 dB. Analytical models (such as AEDT) often have a 95% confidence interval of ±3 dB to ±5 dB.[21] Therefore, a difference of less than 3.0 dB between an estimate from measurements and one from an analytical model is not considered significant.

Table B-5 Aircraft Noise Single Event Data

Aircraft Type	ANP ID	Engine ID	Operation Type	Measured Noise Levels	AEDT Modeled Noise Levels	Difference
Airbus A319-100	A319-131	3IA006	Arrivals	87.8	88.8	1.0
			Departures	86.6	85.7	-0.9
Airbus A320-200	A320-211	8CM055	Arrivals	88.9	89.1	0.2
			Departures	86.2	88.1	1.9
Airbus A320-200	A320-232	1IA003	Arrivals	88.0	88.1	0.1
			Departures	86.9	84.2	-2.7
Boeing 737-700	737700	3CM031	Arrivals	88.3	89.7	1.4
			Departures	87.4	87.5	0.1
Boeing 737-800	737800	11CM072	Arrivals	89.5	89.0	-0.5
			Departures	88.5	88.9	0.4
Bombardier CRJ-900	CRJ9-ER	6GE092	Arrivals	86.1	87.4	1.3
			Departures	85.6	82.8	-2.8
Embraer EMB175	EMB175	6GE094	Arrivals	87.0	88.2	1.2
			Departures	86.2	85.0	-1.2

Source: AEDT Version 3b, CMH ANOMS, Landrum & Brown analysis, 2020.

Because measured noise levels can be affected by other factors including non-aircraft (background) noise levels, it is expected that the measured and modeled noise levels will not match exactly. The comparison of measured and modeled single event noise levels are within an acceptable range of tolerance. The results of the temporary noise measurement program identified no significant inconsistencies between measured noise levels and AEDT modeled noise levels. Therefore, no adjustments were made to the existing aircraft noise profiles in the AEDT database for this Part 150 Noise Compatibility Study.

[20] The Pennsylvania State University, Noise Basics, Online at https://www.noisequest.psu.edu/noisebasics-basics.html, Accessed on May 5, 2020.
[21] Sec. 7.7.1, SAE ARP4721 – Part 1, *Monitoring Aircraft Noise and Operations in the Vicinity of Airports: System Description, Acquisition and Operation,* Issued 2006-08.

B.4 Noise Complaint History

Noise complaint records from 2007 to December 31, 2023 were gathered in a database format for analysis in this study. **Table B-6, *Summary of Noise Complaints*** provides a summary of the number of noise complaints received each year. The total annual number of noise complaints between 2007 and 2015 ranged from 14 to 64, with an average number of complaints per year of approximately 40. From 2016 thru 2018, complaint levels increased to over 200 per year. The increase in complaints since 2016 can be attributed to a high volume of calls from one resident in the Columbus area. As shown in Table B-6, the number of individuals making a complaint has ranged from 11 to 59 between 2007 and 2023.

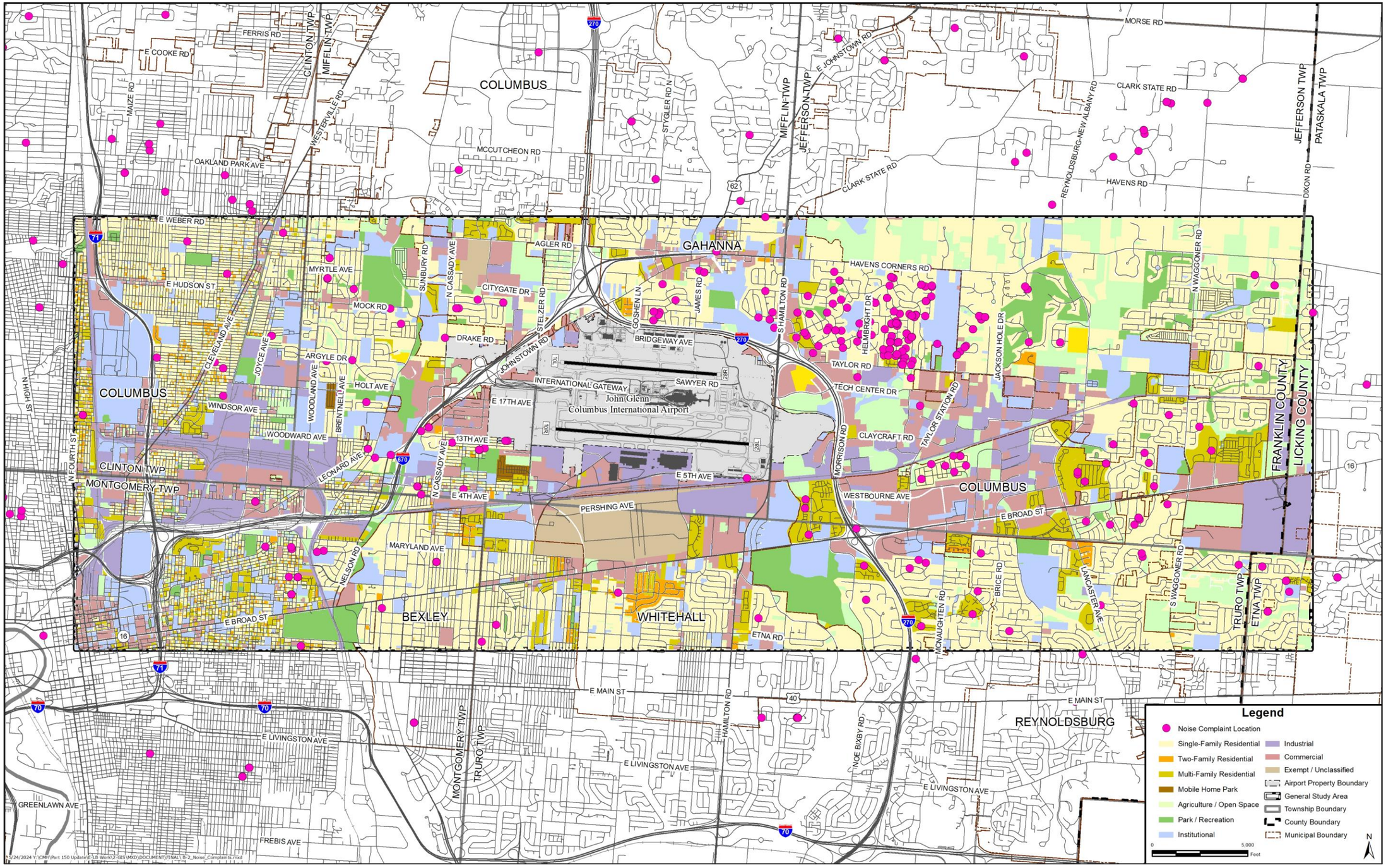
Table B-6 Summary of Noise Complaints

Year	Number of Noise Complaints	Number of Individuals Submitting One or More Complaints
2007	46	36
2008	43	17
2009	43	11
2010	25	20
2011	14	42
2012	27	23
2013	59	36
2014	43	33
2015	64	55
2016	242	28
2017	246	14
2018	205	36
2019	156	37
2020	195	59
2021	310	42
2022	365	51
2023	398	39

Source: Columbus Regional Airport Authority, 2024.

Exhibit B-2, *Location of Noise Complaints (2009 through 2023)*, illustrates the geographic locations of the noise complaints from January 2009 through December 2023. As the exhibit and tables illustrate, a majority of the complaints occur in the immediate vicinity of the Airport, distributed to the east and west in relation to the runways.

Exhibit B-2 Location of Noise Complaints (2009 – 2023)



This page intentionally left blank

Table B-7 summarizes the noise complaint data by time of day the noise event occurred that caused the complaint. As shown, a large percentage of complaints occur in the early morning hours between 5:00 a.m. to 7:59 a.m. This is likely due to the bank of scheduled commercial passenger departures that begins around 5:30 a.m. to meet the demand for air travel and customer preference to arrive at their destination early in the day.

Table B-7 Noise Complaints by Time of Day

Time of Day	Percent of Complaints
0:00 - 1:00	1.5%
1:00 - 2:00	1.0%
2:00 - 3:00	0.3%
3:00 - 4:00	0.6%
4:00 - 5:00	0.5%
5:00 - 6:00	7.4%
6:00 - 7:00	22.8%
7:00 - 8:00	12.5%
8:00 - 9:00	6.4%
9:00 - 10:00	3.0%
10:00 - 11:00	2.3%
11:00 - 12:00	3.7%
12:00 - 13:00	2.6%
13:00 - 14:00	3.2%
14:00 - 15:00	3.7%
15:00 - 16:00	4.5%
16:00 - 17:00	5.7%
17:00 - 18:00	4.3%
18:00 - 19:00	6.5%
19:00 - 20:00	2.6%
20:00 - 21:00	1.4%
21:00 - 22:00	1.2%
22:00 - 23:00	0.9%
23:00 - 0:00	1.4%
Total	100.0%

Source: CRAA Noise Complaint Logs, from January 1, 2016 through December 31, 2023

This page intentionally left blank

Appendix C - Noise Methodology

C.1 Characteristics of Sound

Sound is created by a source that induces vibrations in the air. The vibration produces alternating bands of relatively dense and sparse particles of air, spreading outward from the source like ripples on a pond. Sound waves dissipate with increasing distance from the source. Sound waves can also be reflected, diffracted, refracted, or scattered. When the source stops vibrating, the sound waves disappear almost instantly and the sound ceases.

Sound conveys information to listeners. It can be instructional, alarming, pleasant, relaxing, or annoying. Identical sounds can be characterized by different people or even by the same person at different times, as desirable or unwanted. Unwanted sound is commonly referred to as “noise.”

Sound can be defined in terms of three components:

1) Level (amplitude)

2) Pitch (frequency)

3) Duration (time pattern)

C.1.1 Sound Level

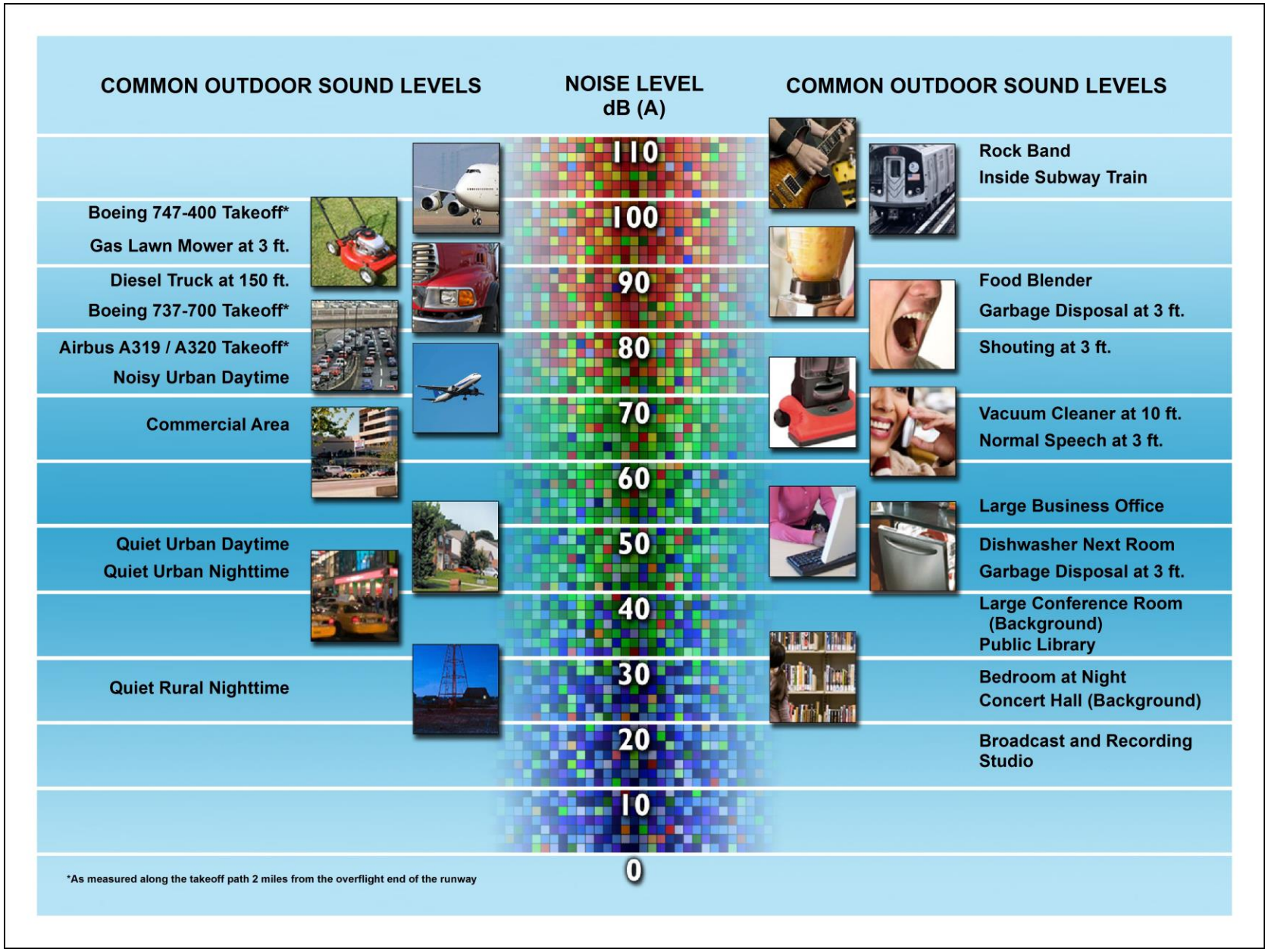
The level or amplitude of sound is measured by the difference between atmospheric pressure (without the sound) and the total pressure (with the sound). Amplitude of sound is like the relative height of the ripples caused by the stone thrown into the water. Although physicists typically measure pressure using the linear Pascal scale, sound is measured using the logarithmic decibel (dB) scale. This is because the range of sound pressures detectable by the human ear can vary from 1 to 100 trillion units. A logarithmic scale allows us to discuss and analyze noise using more manageable numbers. The range of audible sound ranges from approximately 1 to 140 dB, although everyday sounds rarely rise above about 120 dB. The human ear is extremely sensitive to sound pressure fluctuations. A sound of 140 dB, which is sharply painful to humans, contains 100 trillion (10^{14}) times more sound pressure than the least audible sound. **Exhibit C-1, *Comparison of Sound***, shows a comparison of common sources of indoor and outdoor sounds measured on the dB scale.

By definition, a 10 dB increase in sound is equal to a tenfold (10^{1}) increase in the mean square sound pressure of the reference sound. A 20 dB increase is a 100 fold (10^{2}) increase in the mean square sound pressure of the reference sound. A 30 dB increase is a 1,000-fold (10^{3}) increase in mean square sound pressure.

A logarithmic scale requires different mathematics than used with linear scales. The sound pressures of two separate sounds, expressed in dB, are not arithmetically additive. For example, if a sound of 80 dB is added to another sound of 74 dB, the total is a 1 dB increase in the louder sound (81 dB), not the arithmetic sum of 154 dB (See **Exhibit C-2, *Example Addition of Two Decibel Levels***). If two equally loud noise events occur simultaneously, the sound pressure level from the combined events is 3 dB higher than the level produced by either event alone.

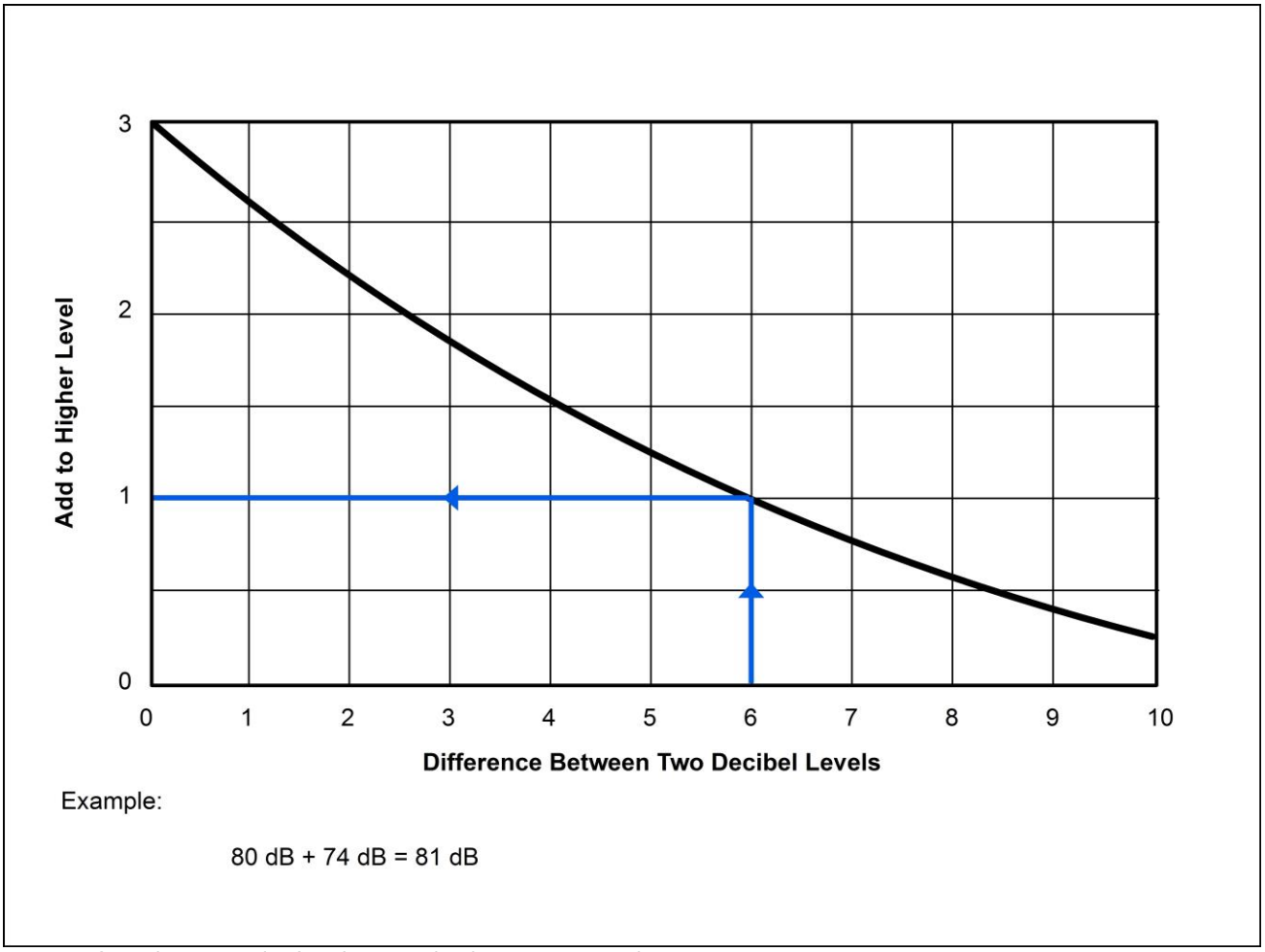
This page intentionally left blank

Exhibit C-1 Comparison of Sound



This page intentionally left blank

Exhibit C-2 Example Addition of Two Decibel Levels

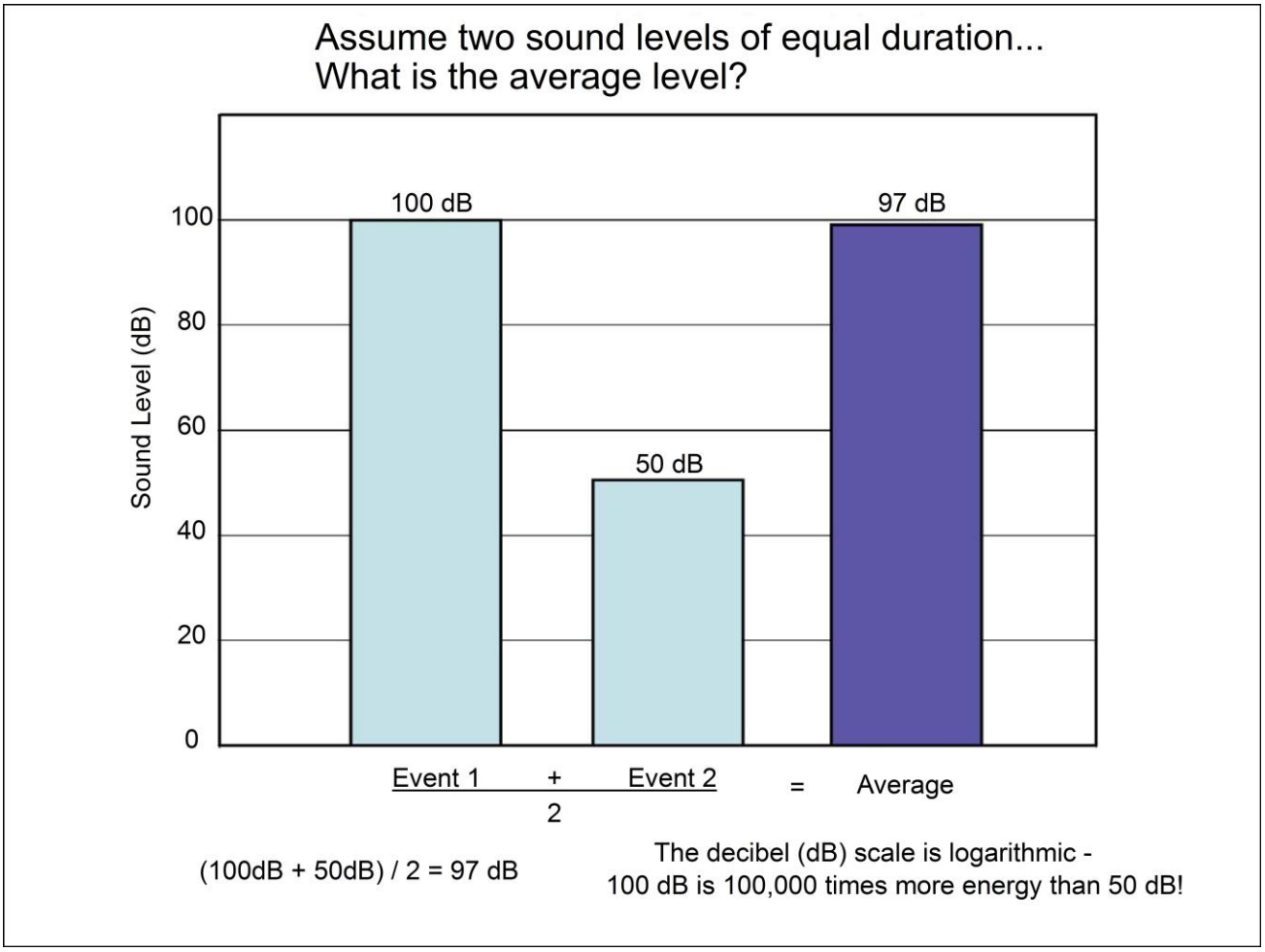


Source: Information on Levels of Environmental Noise. USEPA. March 1974.

Logarithmic averaging also yields results that are quite different from simple arithmetic averaging. Consider the example shown in **Exhibit C-3, *Example of Sound Level Averaging***. Two sound levels of equal duration are averaged. One has a maximum sound level (Lmax) of 100 dB, the other 50 dB. Using conventional arithmetic, the average would be 75 dB. The true result, using logarithmic math, is 97 dB. This is because 100 dB has far more energy than 50 dB (100,000 times as much!) and is overwhelmingly dominant in computing the average of the two sounds.

Human perceptions of changes in sound pressure are less sensitive than a sound level meter. People typically perceive a tenfold increase in sound pressure, a 10 dB increase, as a doubling of loudness. Conversely, a 10 dB decrease in sound pressure is normally perceived as half as loud. In community settings, most people perceive a 3 dB increase in sound pressure (a doubling of the sound pressure or energy) as just noticeable. (In laboratory settings, people with good hearing are able to detect changes in sounds of as little as 1 dB.)

Exhibit C-3 Example of Sound Level Averaging



C.1.2 Sound Frequency

The pitch (or frequency) of sound can vary greatly from a low-pitched rumble to a shrill whistle. If we consider the analogy of ripples in a pond, high frequency sounds are vibrations with tightly spaced ripples, while low rumbles are vibrations with widely spaced ripples. The rate at which a source vibrates determines the frequency. The rate of vibration is measured in units called "Hertz" – the number of cycles, or waves, per second. One's ability to hear a sound depends greatly on the frequency composition. Humans hear sounds best at frequencies between 1,000 and 6,000 Hertz. Sound at frequencies above 10,000 Hertz (high-pitched hissing) and below 100 Hertz (low rumble) are much more difficult to hear.

When attempting to measure sound in a way that approximates what our ears hear, we must give more weight to sounds at the frequencies we hear well and less weight to sounds at frequencies we do not hear well. Acousticians have developed several weighting scales for measuring sound. The A-weighted scale was developed to correlate with the judgments people make about the loudness of sounds. The A-weighted decibel scale (dBA) is used in studies where audible sound is the focus of inquiry. **Exhibit C-4, *Sound Frequency Weighting Curves***, shows the A, B, and C sound weighting scale. The U.S. Environmental Protection Agency (USEPA) has recommended the use of the A-weighted decibel scale in studies of environmental noise.[22] Its use is required by the Federal Aviation Administration (FAA) in airport noise studies.[23] For the purposes of this analysis, dBA was used as the noise metric and dB and dBA are used interchangeably.

C.1.3 Duration of Sounds

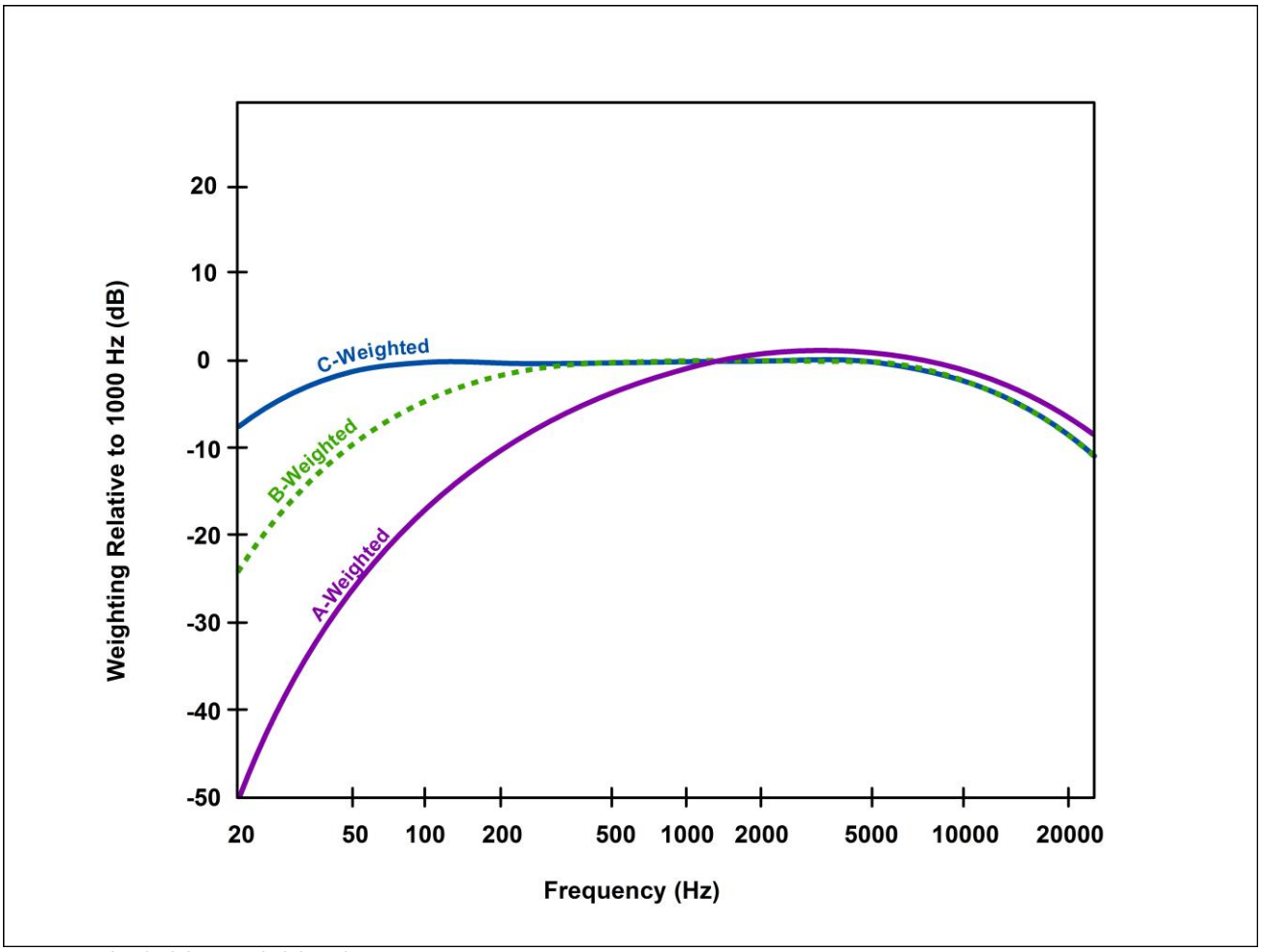
The duration of sounds – their patterns of loudness and pitch over time – can vary greatly. Sounds can be classified as *continuous* like a waterfall, *impulsive* like a firecracker, or *intermittent* like aircraft overflights. Intermittent sounds are produced for relatively short periods, with the instantaneous sound level during the event roughly appearing as a bell-shaped curve. An aircraft event is characterized by the period during which it rises above the background sound level, reaches its peak, and then recedes below the background level.

C.1.4 Perceived Noise Level

Perceived noisiness is another method of rating sound that was originally developed for the assessment of aircraft noise. Perceived noisiness is the subjective measure of the degree to which noise is unwanted or causes annoyance to an individual. To determine perceived noise level, individuals are asked to judge in a laboratory setting when two sounds are equally noisy or disturbing if heard regularly in their own environment. These surveys are inherently subjective and thus subject to greater variability. For example, two separate events of equal noise energy may be perceived differently if one sound is more annoying to the listener than the other.

[22] Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety. U.S. Environmental Protection Agency, Office of Noise Abatement and Control. 1974, P. A-10.
[23] "Airport Noise Compatibility Planning." 14 CFR Part 150, Sec. A150.3.

Exhibit C-4 Sound Frequency Weighting Curves



Source: Federal Highway Administration

C.1.5 Propagation of Noise

Outdoor sound levels decrease as a function of distance from the source, and as a result of wave divergence, atmospheric absorption, and ground attenuation. If sound is radiated from a source in an homogeneous and undisturbed manner, the sound travels as spherical waves. As the sound wave travels away from the source, the sound energy is distributed over a greater area, dispersing the sound energy of the wave. Spherical spreading of the sound wave reduces the noise level at a rate of 6 dB per doubling of the distance.

Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence of the atmosphere and the resultant fluctuations. Atmospheric absorption becomes important at distances of greater than 1,000 feet. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air.

The rate of atmospheric absorption varies with sound frequency. The higher frequencies are more readily absorbed than the lower frequencies. Over large distances, the lower frequencies become the dominant sound as the higher frequencies are attenuated.

Turbulence and gradients of wind, temperature, and humidity also play a significant role in determining the degree of attenuation. Certain conditions, such as inversions, can also result in higher noise levels than would result from spherical spreading as a result of channeling or focusing the sound waves.

The effect of ground attenuation on noise propagation is a function of the height of the source and/or receiver and the characteristics of the terrain. The closer the source of noise is to the ground, the greater the ground absorption. Terrain consisting of soft surfaces such as vegetation provide for more ground absorption than hard surfaces. Ground attenuation is important for the study of noise from airfield operations (such as, thrust reversals) and in the design of noise berms or engine run-up facilities.

C.2 Factors Influencing Human Response to Sound

Many factors influence how a sound is perceived and whether or not it is considered annoying to the listener. These factors include not only physical (acoustic) characteristics of the sound but also secondary (non-acoustic) factors, such as sociological and external factors.

Sound rating scales are developed to account for the factors that affect human response to sound. Nearly all of these factors are relevant in describing how sounds are perceived in the community. Many of the non-acoustic parameters play a prominent role in affecting individual response to noise. Background sound (ambient noise) is also important in describing sound in rural settings. Some non-acoustic factors that may influence an individual's response to aircraft noise include:

- Predictability of when the sound/noise will occur;
- How the noise affects certain activities;
- Fear of an aircraft crashing;
- Belief that aircraft noise could be prevented or reduced by aircraft designers, pilots, or authorities related to airlines or airports; and
- Sensitivity to noise in general.

Thus, it is important to recognize that non-acoustic factors such as those described above, as well as acoustic factors, contribute to human response to noise.

C.3 Standard Noise Descriptors

Given the multiple dimensions of sound, a variety of descriptors, or metrics, have been developed for describing sound and noise. Some of the most commonly used metrics are discussed in this section. They include:

1) Maximum Level (**Lmax**)
2) Time Above Level (**TA**)
3) Sound Exposure Level (**SEL**)
4) Equivalent Sound Level (**Leq**)
5) Day-Night Average Sound Level (**DNL**)

C.3.1 Maximum Level (Lmax)

Lmax is simply the highest sound level recorded during an event or over a given period of time. It provides a simple and understandable way to describe a sound event and compare it with other events. In addition to describing the peak sound level, Lmax can be reported on an appropriate weighted decibel scale (A-weighted, for example) so that it can disclose information about the frequency range of the sound event in addition to the loudness.

Lmax, however, fails to provide any information about the duration of the sound event. This can be a critical shortcoming when comparing different sounds. Even if they have identical Lmax values, sounds of greater duration contain more sound energy than sounds of shorter duration. Research has demonstrated that for many kinds of sound effects, the total sound energy, not just the peak sound level, is a critical consideration.

C.3.2 Time Above Level (TA)

The “time above,” or TA, metric indicates the amount of time that sound at a particular location exceeds a given sound level threshold. TA is often expressed in terms of the total time per day that the threshold is exceeded. The TA metric explicitly provides information about the duration of sound events, although it conveys no information about the peak levels during the period of observation.

C.3.3 Number of Events Above Level (NA)

Similar to TA, the Number of Events Above (NA) metric indicates the total number of aircraft events at particular location that exceed a given sound level threshold in dB. The NA metric explicitly provides information about the number of sound events, although it conveys no information about the duration of the event(s).

C.3.4 Sound Exposure Level (SEL)

The sound exposure level, or SEL metric, provides a way of describing the total sound energy of a single event. In computing the SEL value, all sound energy occurring during the event, within 10 dB of the peak level (Lmax), is mathematically integrated over one second. (Very little information is lost by discarding the sound below the 10 dB cut-off, since the highest sound levels completely dominate the integration calculation.) Consequently, the SEL is always greater than the Lmax for events with a duration greater than one second. SELs for aircraft overflights typically range from five to 10 dB higher than the Lmax for the event.

Exhibit C-5, *Measurement of Different Types of Sound*, shows graphs of instantaneous sound levels for three different events: an aircraft flyover, steady roadway noise, and a firecracker.

The Lmax and the duration of each event differ greatly. The pop of the firecracker is quite loud, 102 dB but lasts less than a second. The aircraft flyover has a considerably lower Lmax at 90 dB, but the event lasts for over a minute. The Lmax from the roadway noise is even quieter at only 72 dB, but it lasts for 15 minutes. By considering the loudness and the duration of these very different events simultaneously, the SEL metric reveals that the total sound energy of all three is identical. This can be a critical finding for studies where total noise dosage is the focus of study. As it happens, research has shown conclusively that noise dosage is crucial in understanding the effects of noise on animals and humans.

C.3.5 Equivalent Sound Level (Leq)

The equivalent sound level (Leq) metric may be used to define cumulative noise dosage, or noise exposure, over a period of time. In computing Leq, the total noise energy over a given period of time, during which numerous events may have occurred, is logarithmically averaged over the time period. The Leq represents the steady sound level that is equivalent to the varying sound levels actually occurring during the period of observation. For example, an 8-hour Leq of 67 dB indicates that the amount of sound energy in all the peaks and valleys that occurred in the 8-hour period is equivalent to the energy in a continuous sound level of 67 dB. Leq is typically computed for measurement periods of 1 hour, 8 hours, or 24 hours, although any time period can be specified.

Exhibit C-6, *Relationship Among Sound Metrics*, shows the relationship of Leq to Lmax and SEL. In this example, a single aircraft event lasting 18 seconds is represented. The instantaneous noise levels for the event range from 64 to an Lmax of 101 dBA. The area under the curve represents the sound energy accumulated during the entire event. The compression of this energy into a single second results in an SEL of 105 dBA. The Leq average of the sound energy for each second during the event would be 93 dB. If this event were the only event to occur during an hour, the aircraft sound energy for the other 3,582 seconds would be considered to be zero. When converted to an hourly Leq, the level would be nearly 70 dB of Leq. This again indicates the dominance of loud events in noise summation and averaging computations.

Leq is a critical noise metric for many kinds of analysis where total noise dosage, or noise exposure, is under investigation. As already noted, noise dosage is important in understanding the effects of noise on both animals and people. Indeed, research has led to the formulation of the “equal energy rule.” This rule states that it is the total acoustical energy to which people are exposed that explains the effects the noise will have on them. That is, a very loud noise with a short duration will have the same effect as a lesser noise with a longer duration if they have the same total sound energy.

C.3.6 Day-Night Average Sound Level (DNL)

The Day-Night Average Sound Level (DNL) metric is really a variation of the 24-hour Leq metric. Like Leq, the DNL metric describes the total noise exposure during a given period. Unlike Leq, however, DNL, by definition, can only be applied to a 24-hour period. In computing DNL, an extra weight of 10 dB is assigned to any sound levels occurring between the hours of 10:00 p.m. and 7:00 a.m. This is intended to account for the greater annoyance that nighttime noise is presumed to cause for most people. Recalling the logarithmic nature of the dB scale, this extra weight treats one nighttime noise event as equivalent to 10 daytime events of the same magnitude.

As with Leq, DNL values are strongly influenced by the loud events. For example, 30 seconds of sound of 100 dB, followed by 23 hours, 59 minutes, and 30 seconds of silence would compute to a DNL value of 65 dB. If the 30 seconds occurred at night, it would yield a DNL of 75 dB.

This example can be roughly equated to an airport noise environment. Recall that an SEL is the mathematical compression of a noise event into one second. Thus, 30 SELs of 100 dB during a 24-hour period would equal DNL 65 dB, or DNL 75 dB if they occurred at night.

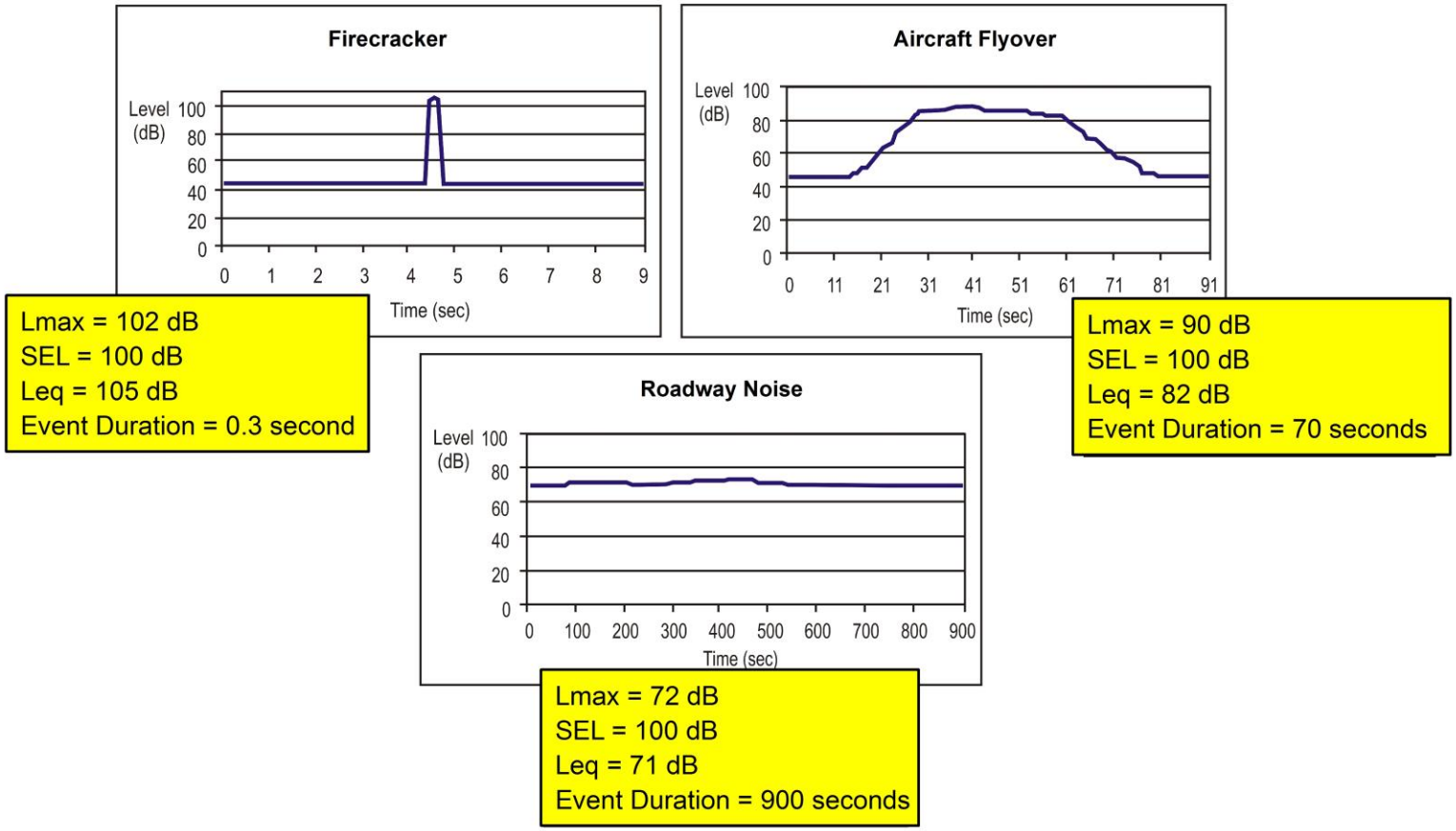
This situation could actually occur in places around a real airport. If the area experienced 30 overflights during the day, each of which produced an SEL of 100 dB, it would be exposed to DNL 65 dB. Recalling the relationship of SEL to the peak noise level (Lmax) of an aircraft overflight, the Lmax recorded for each of those overflights (the peak level a person would actually hear) would typically range from 90 to 95 dB.

C.3.7 Federal Requirements to Use DNL in Environmental Noise Studies

As noted in **Appendix A**, Section A.1.11, the DNL metric is the standard noise metric for use in FAA studies and decision-making purposes. The FAA uses the DNL metric for purposes of determining an individual's cumulative noise exposure, for land use compatibility under 14 CFR part 150, and for assessing the significance of predicted noise impacts under NEPA. The FAA uses the DNL metric for purposes of determining an individual's cumulative noise exposure, for land use compatibility under 14 CFR part 150, and for assessing the significance of predicted noise impacts under NEPA. Ongoing research activities sponsored by the FAA and the broader research community are working to develop a greater understanding of other noise-related impact criteria. This research may expand the use of supplemental metrics, including new metrics designed to measure speech interference (N75), Percent Awakening, Learning (Leq(8)), and rattling from low frequency noise Lmax(c).[24]

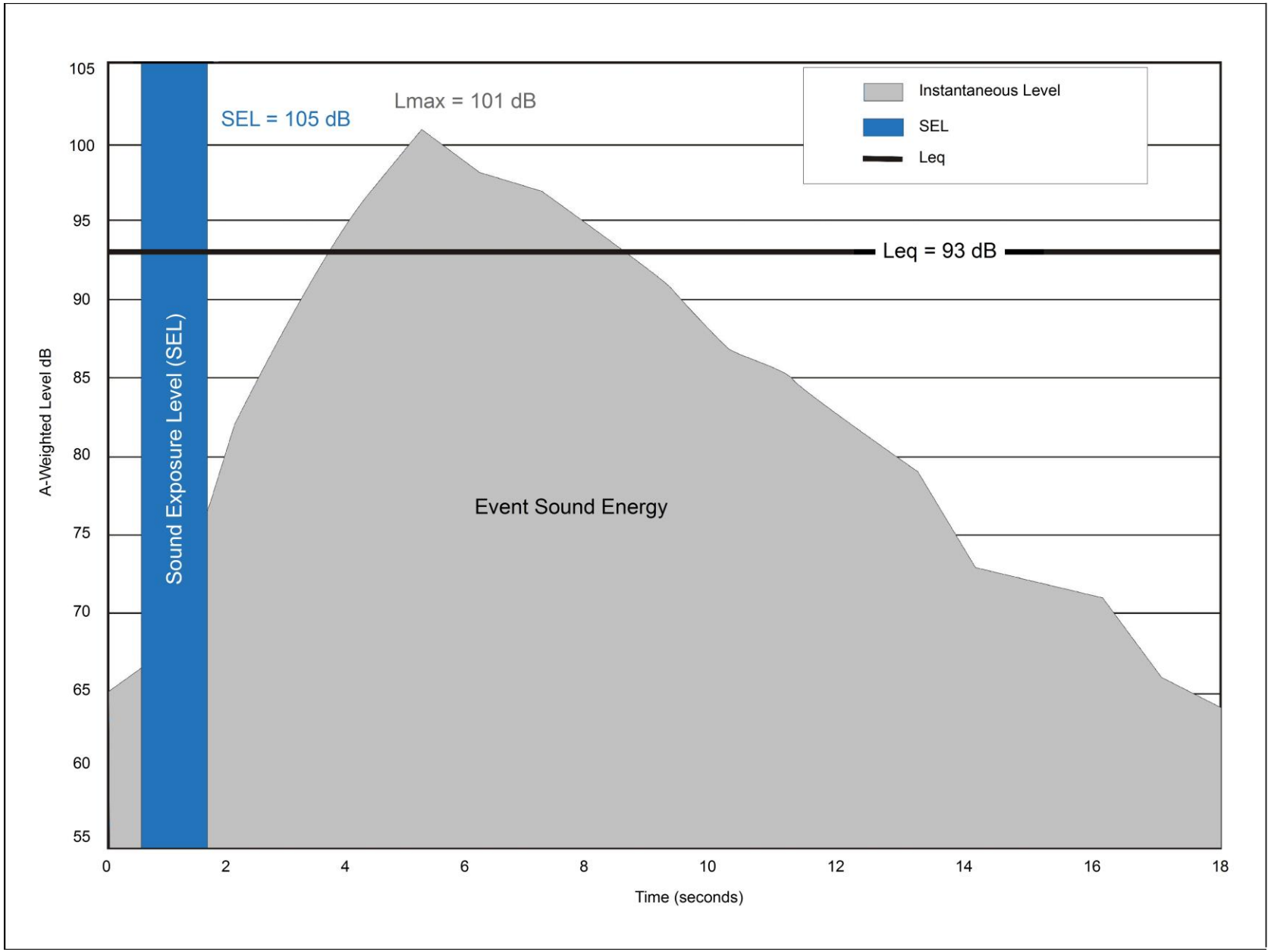
[24] *Report to Congress, FAA Reauthorization Act of 2018 (Pub. L. 115-254), Section 188 and Sec 173.* Federal Aviation Administration, 2020.

Exhibit C-5 Measurement of Different Types of Sound



This page intentionally left blank

Exhibit C-6 Relationship Among Sound Metrics



This page intentionally left blank

C.4 Health Effects of Noise

A considerable amount of research has been conducted to identify, measure, and quantify the potential effects of aviation noise on health. The various methods by which noise can be measured (e.g. single dose, long-term average, number of events above a certain level, etc.), and difficulties in separating other lifestyle factors from the analysis, increases the complexity of determining the health effects of noise, and has caused considerable variability in the results of past studies. The health effects of noise are often divided into the following topics: cardiovascular effects, hearing loss, sleep disturbance, and speech/communication interference.

C.4.1 Cardiovascular Effects

Several studies have suggested that increased hypertension or other cardiovascular effects, such as increased blood pressure, and change in pulse rate, may be associated with long-term exposure to high levels of environmental noise. When conducting cross-sectional studies of environmental noise exposure, it is difficult to control for other important variables. Subsequent reviews of past research have pointed out that such studies "…are notoriously difficult to interpret. They often report conflicting results, generally do not identify a cause and effect relationship, and often do not report a dose-response relationship between the cause and effect."[25] In 2018, the World Health Organization (WHO) published its Environmental Noise Guidelines report (WHO report) with reference to recent research related to aircraft noise and human response.[26] The WHO report references two ecological studies that provide information on the relationship between aircraft noise and incidence of ischemic heart disease (IHD); however, this "…evidence was rated low quality." Additionally, the WHO report reference one cohort study and several cross-sectional studies of the relationship between aircraft noise and hypertension. The WHO report noted "…inconsistency across studies" and the "…evidence was rated low quality." Similar studies of the relationship between aircraft noise and cases of stroke were reviewed. The WHO report noted that this "…evidence was rated very low quality." Therefore, it is difficult to draw any conclusions about the relationship between aircraft noise exposure and cardiovascular effects.

C.4.2 Hearing Loss

The potential for noise-induced hearing loss is commonly associated with occupational noise exposure from working in a noisy work environment or recreational noise such as listening to loud music. Recent studies have concluded that "because environmental noise does not approximate occupational noise levels or recreational noise exposures…it does not have an effect on hearing threshold levels." Furthermore, "aviation noise does not pose a risk factor for child or adolescent hearing loss, but perhaps other noise sources (personal music devices, concerts, motorcycles, or night clubs) are a main risk factor."[27] This conclusion is supported by the 2018 WHO Environmental Noise Guidelines which notes that "(n)o studies were found, and therefore no evidence was available on the association between aircraft noise and hearing impairment and tinnitus."[28] Because aviation noise levels near airports do not approach levels of occupational or recreational noise exposures associated with hearing loss, hearing impairment is likely not caused by aircraft noise for populations living near an airport.

[25] Airport Cooperative Research Program, Transportation Research Board, Effects of Aircraft Noise: Research Update on Selected Topics, 2008.
[26] World Health Organization, Regional Office for Europe, Environmental Noise Guidelines for the European Region, 2018.
[27] Airport Cooperative Research Program, Transportation Research Board, Effects of Aircraft Noise: Research Update on Selected Topics, 2008.
[28] World Health Organization, Regional Office for Europe, Environmental Noise Guidelines for the European Region, 2018.

C.4.3 Sleep Disturbance

Sleep disturbance is a common complaint from people who live in the vicinity of an airport. A large amount of research has been published on the topic of sleep disturbance caused by environmental noise. This research has produced variable results due to differing definitions of sleep disturbance, different ways for measuring sleep disturbance (behavioral awakenings or sleep interruption), and different settings in which to measure it (laboratory setting or field setting).

In 1992, the Federal Interagency Committee on Noise (FICON) recommended an interim dose-response curve to predict the percent of the exposed population expected to be awakened (percent awakening) as a function of the exposure to single event noise levels expressed in terms of the Sound Exposure Level (SEL). This interim curve was based on statistical adjustment of previous analysis and included data from both laboratory and field studies. In 1997, Federal Interagency Committee on Aviation Noise (FICAN) recommended a revised sleep disturbance relationship based on data and analysis from three field studies.

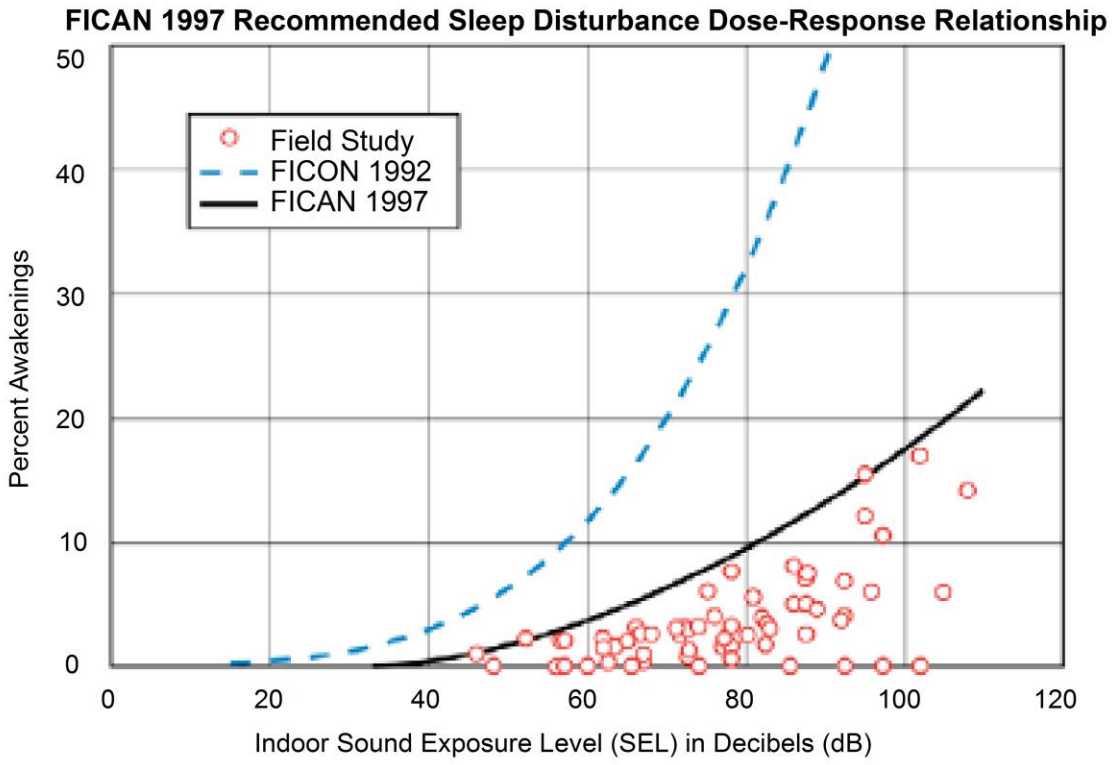
Exhibit C-7, *Sleep Disturbance Dose-Response Curves*, show the results of the 1992 and 1997 analyses. The top graph shows a comparison of the 1992 FICON and 1997 FICAN curves. The 1997 FICAN curve represents the upper limit of the observed field data and should be interpreted as predicting the "maximum percent of the exposed population expected to be behaviorally awakened", or the "maximum percent awakened" for a given residential population.

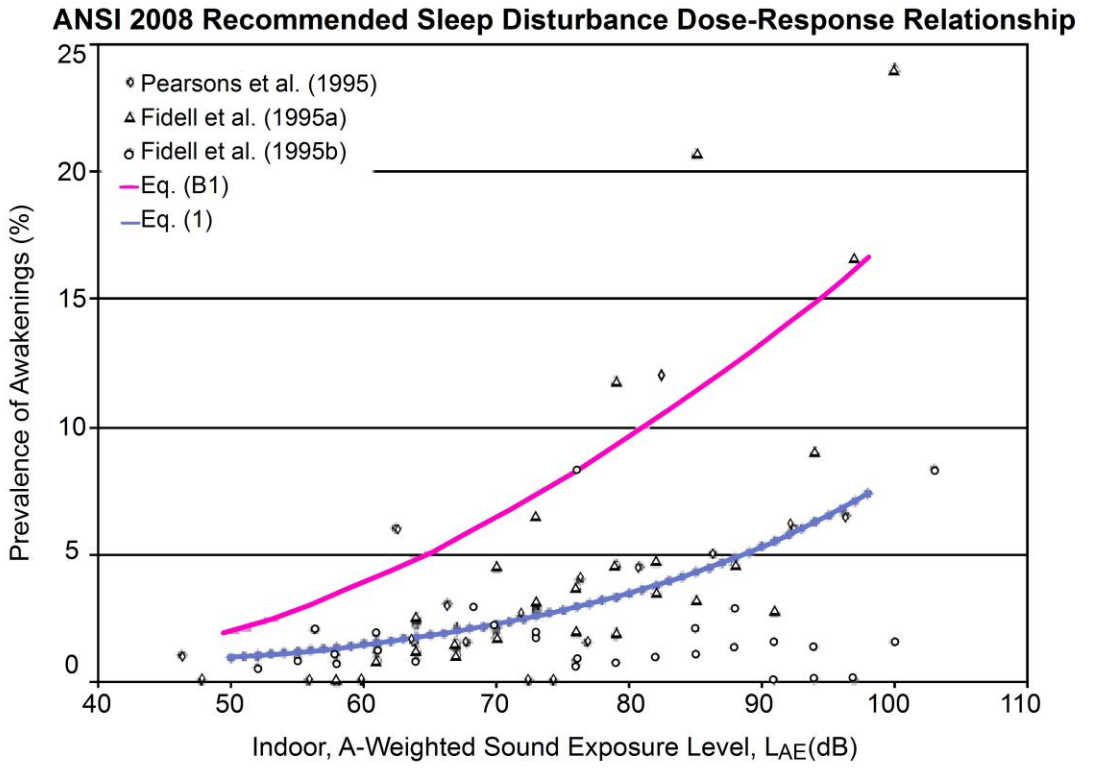
In 2008, FICAN recommended the use of a revised method to predict sleep disturbance in terms of percent awakenings based on data published by the American National Standards Institute (ANSI).[29] In contrast to the earlier FICAN recommendation, the 2008 ANSI standard indicates that the probability of awakening is lower for a single noise event in cases where the population is exposed to the given noise source for a long period of time (more than one year) compared to the probability of awakening for sound that is new to an area. In Exhibit C-7, the lower graph shows these two relationships, with Equation 1 (blue dotted line) representing percent awakenings from long-term noise and Equation B1 (pink dashed line) representing percent awakenings from a new noise source based on the 1997 FICAN results. As shown in this exhibit, at an indoor Sound Exposure Level (SEL) of 100 dB, the probability of awakenings would be expected to exceed 15 percent for a new noise source; yet for long-term noise sources, the probability of awakening is expected to be less than 10 percent.

The numerous studies and reports that have been developed on the subject of sleep disturbance related to environmental noise over the past several decades have produced varied results. A review of past studies conducted by the Airport Cooperative Research Program suggests that in-home sleep disturbance studies clearly demonstrate that it requires more noise to cause awakenings than was previously theorized based on laboratory sleep disturbance studies.[30] The 2018 WHO Environmental Noise Guidelines references six studies that attempted to measure sleep disturbance at noise levels between 40 dB and 65 dB. Over 11% of the population was characterized as highly sleep-disturbed at nighttime levels of 40 dB. These studies were based on self-reporting and the "…evidence was rated moderate quality…" for an association between aircraft noise and probability of awakenings.[31]

[29] ANSI S12.9-2008, Quantities and Procedures for Description and Measurement of Environmental Sound — Part 6: Methods for Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes, 2008.
[30] Airport Cooperative Research Program, Transportation Research Board, Effects of Aircraft Noise: Research Update on Selected Topics, 2008.
[31] World Health Organization, Regional Office for Europe, Environmental Noise Guidelines for the European Region, 2018.

Exhibit C-7 Sleep Disturbance Dose-Response Curves





Sources: Federal Interagency Committee on Aviation Noise (FICAN), June 1997; American National Standards Institute, 2008.

Due to the variability of study methodologies, particularly studies outside of a laboratory, and other influencing factors, it is difficult to determine the noise level at which a high percentage of the population would be expected to be awakened by aircraft noise. No definitive conclusions have been drawn on the percent of a population that is estimated to be awakened by a certain level of aircraft noise and recent studies have cautioned about the over interpretation of the data.[32]

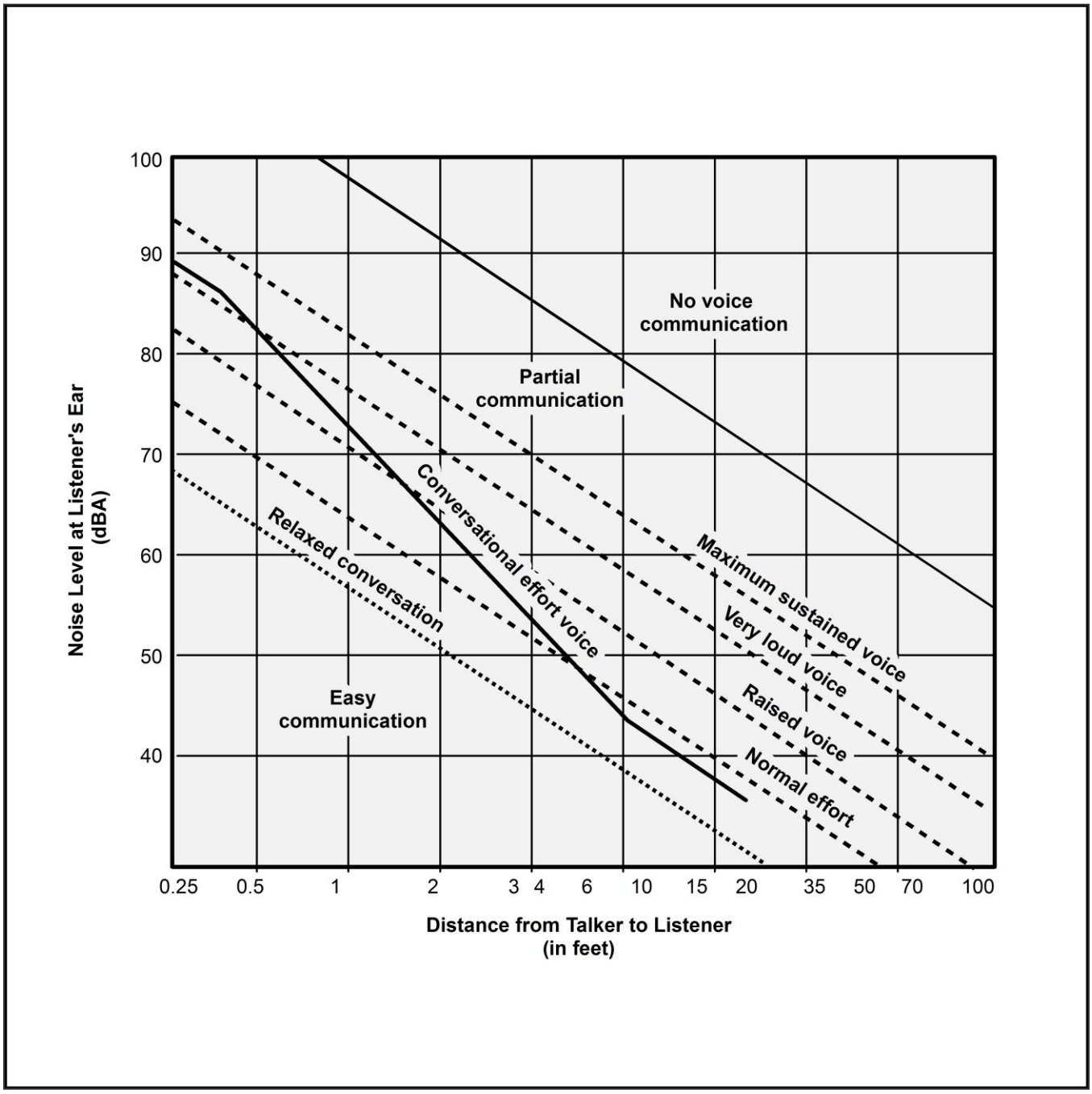
C.4.4 Communication Interference

Communication interference can impact activities such as personal conversations, classroom learning, and listening to radio and television. Most studies have focused on communication interference due to continual noise sources. In 1974, the USEPA published *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, which is one of the few studies to focus on intermittent noise. The study concluded that for voice communication, an indoor Leq of 45 dB allows normal conversation at distances up to 2 meters with 95 percent sentence intelligibility. **Exhibit C-8, *Noise Effects on Distance Necessary for Speech Communication***, shows the required distance between talker and listener based on the type of speech communication (normal voice, loud voice, etc.) and the environmental noise level from the 1974 USEPA report.

Noise can also impact communication between student and teacher necessary for learning in a classroom setting. It is usually accepted that noise levels above a certain Leq may affect a child's learning experiences. Research has shown a "decline in reading when outdoor noise levels equal or exceed Leq of 65 dBA."[33] Furthermore, a study conducted by FICAN in 2007 found: "(1) a substantial association between noise reduction and decreased failure (worst-score) rates for high-school students, and (2) significant association between noise reduction and increased average test scores for student/test subgroups. In general, the study found little dependence upon student group and upon test type."[34] A study of noise exposure and the effects on school test scores between 2000/01 and 2008/09 found "…statistically significant associations between airport noise and student mathematics and reading test scores, after taking demographic and school factors into account."[35] This study also found that schools that had been provided sound insulation had better test scores than schools that were not sound insulated. This Study made no recommendation regarding the noise level at which impacts upon learning may occur.

[32] Airport Cooperative Research Program, Transportation Research Board, Effects of Aircraft Noise: Research Update on Selected Topics, 2008.
[33] Airport Cooperative Research Program, Transportation Research Board, Effects of Aircraft Noise: Research Update on Selected Topics, 2008.
[34] Federal Interagency Committee on Aviation Noise (FICAN), Findings of the FICAN Pilot Study on the Relationship between Aircraft Noise Reduction and Changes in Standardized Test Scores, July 2007.
[35] National Academies of Sciences, Engineering, and Medicine; Assessing Aircraft Noise Conditions Affecting Student Learning, Volume 1: Final Report; 2014.

Exhibit C-8 Noise Effects on Distance Necessary for Speech Communication



Source: FICON, 1992; from USEPA, 1974.

C.5 Baseline Noise Modeling Methodology

The following sections describe the noise modeling methodology and assumptions for the Existing (2024) Baseline and Future (2029) Baseline Noise Exposure Contours for CMH, and presents the noise modeling results.

The analysis of noise exposure around CMH was prepared using the FAA Aviation Environmental Design Tool (AEDT) Version 3f, which was the current version at the time the noise modeling began. Inputs to the AEDT include runway definition, number of aircraft operations during the time period evaluated, the types of aircraft flown, the time of day when they are flown, how frequently each runway is used for arriving and departing aircraft, the routes of flight used when arriving to and departing from the runways, and departure profiles. The AEDT calculates noise exposure for the area around an airport and outputs contours of noise exposure using the Day/Night Average Sound Level (DNL) metric. Noise exposure contours for the levels of 60, 65, 70, and 75 DNL will be calculated to represent average-annual day conditions at CMH.

C.5.1 Existing (2024) Baseline Noise Exposure Contour Input Data

Runway Definition: CMH has two east/west parallel runways (10L/28R and 10R/28L) spaced approximately 3,500 feet apart. Runway 10R/28L is the longest runway on the airfield at 10,113 feet in length and is 150 feet wide and is equipped with a CAT-II ILS on both ends. Runway 10L/28R is 8,001 feet long and 150 feet wide and is equipped with a CAT-I ILS on both ends. **Exhibit 1** shows the existing airfield layout. The following provides the current runways and lengths at CMH:

Runway	Length (feet)
10L/28R	8,000
10R/28L	10,114

Number of Operations and Fleet Mix: The number of annual operations at CMH was based on Air Traffic Control Tower (ATCT) counts for the period from September 2022 through August 2023. During that period, 118,397 annual operations occurred at CMH. When divided by 365, the result is 324.4 average-annual day operations. Specific aircraft types and times of operation were developed from a combination of landing fee reports, Airport Noise and Operations Management System (ANOMS) data,[36] and Official Airline Guide (OAG) data for the same period. **Table 1**, which provides a summary of the average annual day operations by aircraft category and time of day, shows that large passenger jets made up the majority (70 percent) of all operations at CMH for the Existing (2024) Baseline period. Propeller aircraft (props) comprised the smallest number of operations at CMH. **Table 2** shows the average daily number of arrivals and departures by the individual aircraft types. Aircraft that were the most commonly operated at CMH during the Existing (2024) Baseline period include the Boeing 737-700 series, Boeing 737-800 series and the Embraer EMB-170/175 series jets.

[36] Data was obtained from the Airport Noise and Operations Management System (ANOMS) operated by the Columbus Regional Airport Authority (CRAA). The ANOMS receives radar data from the FAA's secure data clearinghouse and includes location, time, and operational information such as operation type, aircraft type, airline operator, and runway used for landing or takeoff.

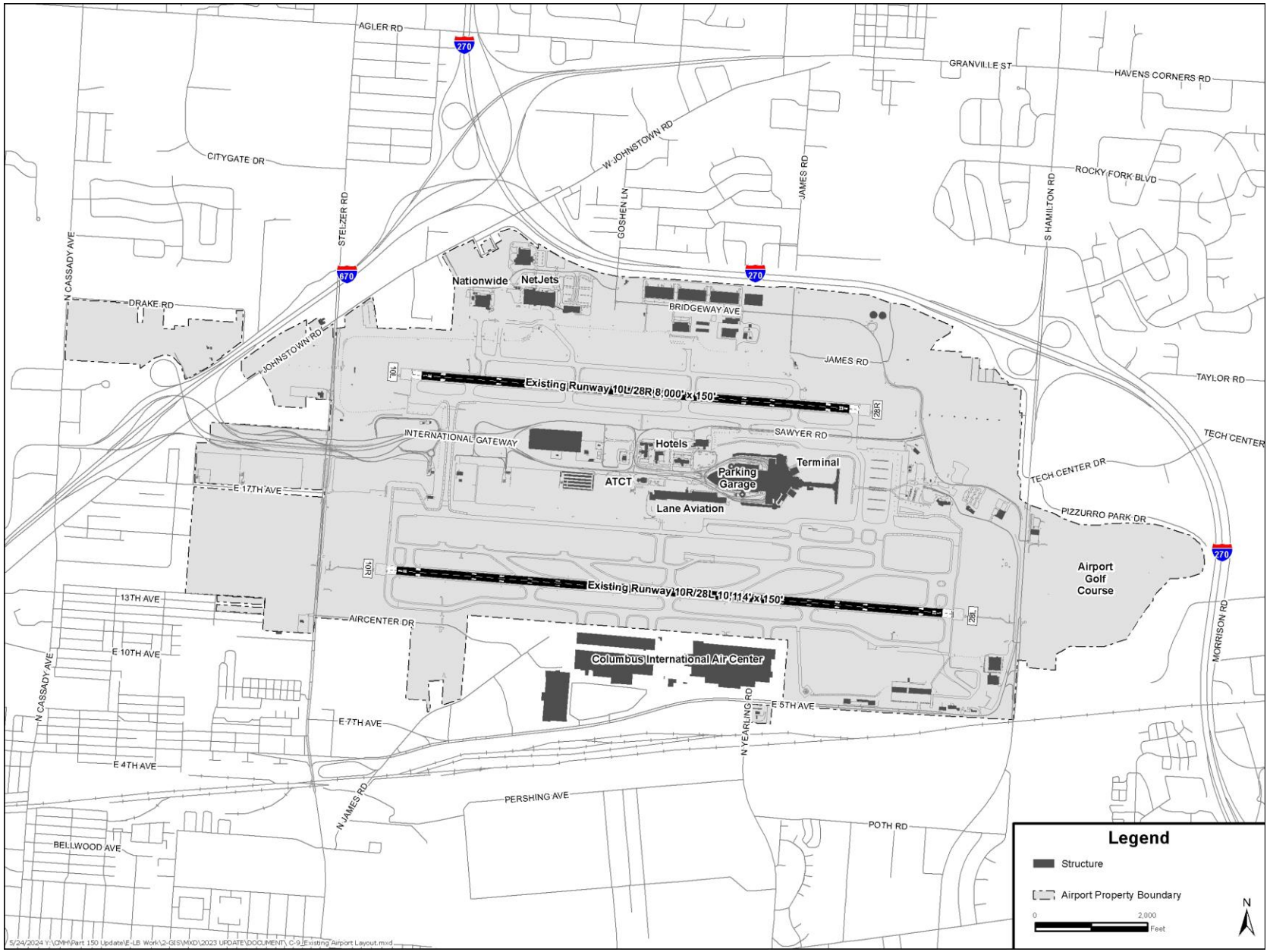
Table C-1 Summary of Average-Annual Day Operations – Existing (2024) Baseline

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

This page intentionally left blank

Exhibit C-9 Current Airfield Layout



This page intentionally left blank

Table C-2 Existing (2024) Average-Annual Day Operations by Aircraft Type

Aircraft Type	AED ANP Model ID	Arrivals		Departures		Total
		Day	Night	Day	Night	
Large Jets						
Airbus A220-300	737700	0.4	0.0	0.4	0.0	0.8
Airbus A319-100 Series	A319-131	4.1	1.6	4.4	1.3	11.4
Airbus A320-200 Series	A320-211	4.3	2.3	5.8	0.8	13.2
Airbus A320-NEO	A320-270N	1.1	0.4	1.0	0.5	3.0
Airbus A321-200 Series	A321-232	1.8	0.9	2.0	0.7	5.4
Airbus A321-NEO	A321-232	0.5	0.4	0.7	0.2	1.8
Boeing 717-200 Series	717200	0.8	0.2	0.9	0.2	2.1
Boeing 737-700 Series	737700	15.0	3.5	15.0	3.5	37.0
Boeing 737-8	7378MAX	3.3	1.6	3.6	1.3	9.8
Boeing 737-800 Series	737800	10.9	4.5	12.6	2.8	30.8
Boeing 737-9	7378MAX	0.4	0.1	0.5	0.0	1.0
Boeing 737-900 Series	737800	0.5	0.2	0.5	0.1	1.3
Boeing 737-900-ER	737800	4.0	1.4	4.3	1.1	10.8
Bombardier CRJ-700	CRJ9-ER	0.3	0.0	0.4	0.0	0.7
Bombardier CRJ-700-ER	CRJ9-ER	0.7	0.1	0.7	0.0	1.5
Bombardier CRJ-900	CRJ9-ER	5.0	0.6	4.7	0.9	11.2
Bombardier CRJ-900-ER	CRJ9-ER	0.4	0.0	0.4	0.1	0.9
Embraer ERJ170	EMB170	0.7	0.1	0.7	0.1	1.6
Embraer ERJ170-LR	EMB170	5.3	1.1	5.5	0.9	12.8
Embraer ERJ175	EMB175	1.6	0.3	1.7	0.3	3.9
Embraer ERJ175-LR	EMB175	29.0	4.1	28.1	4.9	66.1
Embraer ERJ190	EMB190	0.3	0.0	0.3	0.0	0.6
Embraer ERJ195	EMB195	0.5	0.0	0.4	0.0	0.9
Subtotal		90.9	23.4	94.6	19.7	228.6
Regional / Air Taxi Jets						
Bombardier CRJ-200	CL600	1.7	0.1	1.6	0.2	3.6
Bombardier CRJ-200-LR	CL600	12.7	0.8	11.7	1.8	27.0
Embraer ERJ135	EMB145	0.2	0.0	0.2	0.0	0.4
Embraer ERJ145	EMB145	1.9	0.0	1.9	0.0	3.8
Embraer ERJ145-XR	EMB145	5.9	0.7	5.9	0.7	13.2
Subtotal		22.4	1.6	21.3	2.7	48.0

Table C-2 Existing (2024) Average-Annual Day Operations by Aircraft Type *(Continued)*

Aircraft Type	AED ANP Model ID	Arrivals		Departures		Total
		Day	Night	Day	Night	
General Aviation Jets						
Bombardier Challenger 300	CL600	2.0	0.1	2.0	0.1	4.2
Bombardier Challenger 600	CL600	0.9	0.1	0.9	0.1	2.0
Bombardier Global 5000	BD-700-1A11	0.2	0.0	0.2	0.0	0.4
Bombardier Global Express	BD-700-1A10	0.4	0.0	0.4	0.0	0.8
Bombardier Learjet 31	LEAR35	0.3	0.1	0.3	0.1	0.8
Bombardier Learjet 35	LEAR35	0.1	0.0	0.1	0.0	0.2
Bombardier Learjet 45	LEAR35	0.7	0.0	0.7	0.0	1.4
Bombardier Learjet 60	LEAR35	0.4	0.1	0.4	0.1	1.0
Cessna 501 Citation ISP	CNA500	0.1	0.0	0.1	0.0	0.2
Cessna 550 Citation II	CNA55B	0.5	0.0	0.5	0.0	1.0
Cessna 560 Citation V	CNA560U	0.6	0.0	0.6	0.0	1.2
Cessna 560 Citation XLS	CNA560XL	0.4	0.0	0.4	0.0	0.8
Cessna 650 Citation III	CIT3	0.1	0.0	0.1	0.0	0.2
Cessna 680 Citation Sovereign	CNA680	0.5	0.0	0.5	0.0	1.0
Cessna 680-A Citation Latitude	CNA680	0.1	0.0	0.1	0.0	0.2
Cessna 700 Citation Longitude	CNA680	0.6	0.1	0.6	0.1	1.4
Cessna 750 Citation X	CNA750	0.1	0.0	0.1	0.0	0.2
CESSNA CITATION 510	CNA510	0.1	0.0	0.1	0.0	0.2
Cessna CitationJet CJ2 (Cessna 525A)	CNA525C	0.7	0.1	0.7	0.1	1.6
Cessna CitationJet CJ3 (Cessna 525B)	CNA525C	0.9	0.1	0.9	0.1	2.0
Cessna CitationJet CJ4 (Cessna 525C)	CNA525C	0.8	0.1	0.8	0.1	1.8
Dassault Falcon 200	FAL20	0.5	0.0	0.5	0.0	1.0
Dassault Falcon 50	FAL900EX	0.7	0.1	0.7	0.1	1.6
Dassault Falcon 900	FAL900EX	0.2	0.0	0.2	0.0	0.4
Eclipse 500 / PW610F	ECLIPSE500	0.1	0.0	0.1	0.0	0.2
Embraer Legacy 500 (EMB-550)	CNA55B	0.1	0.0	0.1	0.0	0.2
Embraer Legacy 600	EMB145	0.2	0.0	0.2	0.0	0.4
Embraer Phenom 100 (EMB-500)	CNA510	0.2	0.0	0.2	0.0	0.4
Embraer Phenom 300 (EMB-505)	CNA55B	0.6	0.0	0.6	0.0	1.2
Falcon 7X	GIV	0.1	0.0	0.1	0.0	0.2
Gulfstream Aerospace Gulfstream G500 (G-7)	GV	0.1	0.0	0.1	0.0	0.2
Gulfstream G150	IA1125	0.0	0.0	0.0	0.0	0.0

Table C-2 Existing (2024) Average-Annual Day Operations by Aircraft Type *(Continued)*

Aircraft Type	AED ANP Model ID	Arrivals		Departures		Total
		Day	Night	Day	Night	
General Aviation Jets, (continued)						
Gulfstream G280	CL601	0.2	0.0	0.2	0.0	0.4
Gulfstream G600	GV	0.1	0.0	0.1	0.0	0.2
Gulfstream G650	G650ER	0.1	0.0	0.1	0.0	0.2
Gulfstream IV-SP	GIV	0.5	0.0	0.5	0.0	1.0
Gulfstream V-SP	GV	0.1	0.0	0.1	0.0	0.2
Honda HA-420 Hondajet	CNA510	0.2	0.0	0.2	0.0	0.4
Raytheon Hawker 4000 Horizon	CNA750	0.3	0.0	0.3	0.0	0.6
Raytheon Hawker 800	LEAR35	0.6	0.1	0.6	0.1	1.4
Raytheon Premier I	CNA55B	0.1	0.0	0.1	0.0	0.2
Subtotal		15.5	1.0	15.5	1.0	33.0
General Aviation / Commuter Props						
Cessna 172 Skyhawk	CNA172	0.6	0.0	0.5	0.1	1.2
Cessna 182	CNA182	0.3	0.0	0.3	0.0	0.6
Cessna 206	CNA20T	0.1	0.0	0.1	0.0	0.2
Cessna 208 Caravan	CNA208	0.1	0.0	0.1	0.0	0.2
Cessna 210 Centurion	GASEPV	0.1	0.0	0.1	0.0	0.2
Cessna 310	BEC58P	0.1	0.0	0.1	0.0	0.2
Cessna 340	BEC58P	0.1	0.0	0.1	0.0	0.2
Cessna 414	BEC58P	0.1	0.0	0.1	0.0	0.2
Cessna 441 Conquest II	CNA441	0.2	0.0	0.2	0.0	0.4
Cirrus SR20	COMSEP	1.2	0.1	1.2	0.1	2.6
Cirrus Vision SF50 (FAS)	CNA510	0.4	0.0	0.4	0.0	0.8
EADS Socata TBM-700	CNA208	0.2	0.0	0.2	0.0	0.4
Lancair Evolution (FAS)	GASEPV	0.2	0.0	0.2	0.0	0.4
Mooney M20-K	GASEPV	0.1	0.0	0.1	0.0	0.2
Piaggio P.180 Avanti	DHC6	0.1	0.0	0.1	0.0	0.2
Pilatus PC-12	CNA208	0.5	0.1	0.5	0.1	1.2
Pilatus PC-24	CNA55B	0.2	0.0	0.2	0.0	0.4
Piper PA-24 Comanche	GASEPV	0.1	0.0	0.1	0.0	0.2
Piper PA-28 Cherokee Series	GASEPF	0.5	0.1	0.5	0.1	1.2
Piper PA-30 Twin Comanche	PA30	0.1	0.0	0.1	0.0	0.2
Piper PA-31 Navajo	BEC58P	0.1	0.0	0.1	0.0	0.2
Piper PA-32 Cherokee Six	GASEPV	0.1	0.0	0.1	0.0	0.2
Piper PA46 (Piston)	GASEPV	0.1	0.0	0.1	0.0	0.2

Table C-2 Existing (2024) Average-Annual Day Operations by Aircraft Type *(Continued)*

Aircraft Type	AED ANP Model ID	Arrivals		Departures		Total
		Day	Night	Day	Night	
General Aviation / Commuter Props, *(continued)*						
Piper PA46-TP Meridian	CNA208	0.2	0.0	0.2	0.0	0.4
Raytheon Beech Baron 58	BEC58P	0.1	0.1	0.1	0.1	0.4
Raytheon Beech Bonanza 36	GASEPV	0.3	0.0	0.3	0.0	0.6
Raytheon King Air 100	DHC6	0.1	0.0	0.1	0.0	0.2
Raytheon King Air 90	DHC6	0.1	0.0	0.1	0.0	0.2
Raytheon Super King Air 200	DHC6	0.3	0.0	0.3	0.0	0.6
Raytheon Super King Air 300	DHC6	0.3	0.0	0.3	0.0	0.6
Subtotal		7.0	0.4	6.9	0.5	14.8
Grand Total		**135.8**	**26.4**	**138.3**	**23.9**	**324.4**

Notes: Total may not equal sum total due to rounding.
Daytime = 7:00am – 9:59pm, Nighttime = 10:00pm – 6:59am.
* The 737-800 MAX was grounded by FAA on March 13, 2019. Prior to that the aircraft operated at CMH. Therefore, this aircraft is modeled for existing conditions based on usage from September 1, 2018 through March 12, 2019. The grounding was lifted by FAA on November 18, 2020.

Source: Federal Aviation Administration (FAA) Operations Network (OpsNet) data, CRAA Landing Fee Reports, CMH ANOMS data, Landrum & Brown analysis, 2020.

Runway End Utilization: Average-annual runway end utilization was derived from analysis of ANOMS data from September 2022 through August 2023. Runway use was derived for aircraft types and summarized by category. During the daytime (7:00 a.m. to 9:59 p.m.), the Airport is operated in one of two operating configurations—west flow (approximately 76 percent of the time) or east flow (approximately 24 percent of the time). The primary flow during the Existing (2024) Baseline period was west flow due to the prevailing southwest winds. When the airport operated in this configuration, aircraft arrive from the east heading west and depart to the west on Runways 28L and 28R. During east flow operations, aircraft arrive from the west heading east and depart to the east on Runways 10L and 10R. **Table C-3** summarizes the percentage of use by each aircraft category on each of the runways at CMH during the daytime (7:00 a.m. – 9:59 p.m.) and nighttime (10:00 p.m. – 6:59 a.m.) periods.

Table C-3 Existing (2024) Runway End Utilization

Aircraft Category	Runway End				Total
	10L	10R	28L	28R	
Daytime Arrivals					
Large Jets	10.7%	12.9%	38.4%	38.0%	100.0%
Regional / Air Taxi Jets	17.5%	4.5%	15.3%	62.7%	100.0%
General Aviation Jets	9.9%	13.7%	45.5%	30.9%	100.0%
General Aviation / Commuter Props	4.5%	19.3%	63.3%	12.9%	100.0%
Nighttime Arrivals					
Large Jets	9.1%	17.4%	44.1%	29.4%	100.0%
Regional / Air Taxi Jets	10.5%	11.9%	37.3%	40.3%	100.0%
General Aviation Jets	10.1%	15.3%	47.7%	27.0%	100.0%
General Aviation / Commuter Props	1.8%	28.5%	67.8%	1.9%	100.0%
Daytime Departures					
Large Jets	12.0%	11.2%	36.3%	40.5%	100.0%
Regional / Air Taxi Jets	17.9%	3.7%	14.2%	64.2%	100.0%
General Aviation Jets	10.3%	13.0%	43.0%	33.7%	100.0%
General Aviation / Commuter Props	4.6%	19.7%	61.5%	14.2%	100.0%
Nighttime Departures					
Large Jets	10.3%	13.2%	42.8%	33.8%	100.0%
Regional / Air Taxi Jets	19.3%	5.7%	10.2%	64.8%	100.0%
General Aviation Jets	7.3%	17.3%	51.0%	24.4%	100.0%
General Aviation / Commuter Props	0.9%	26.0%	69.8%	3.3%	100.0%

Notes: Daytime = 7:00 a.m. – 9:59 p.m., Nighttime = 10:00 p.m. – 6:59 a.m.
Total may not equal sum total due to rounding.

Source: CMH ANOMS data, Landrum & Brown analysis, 2024.

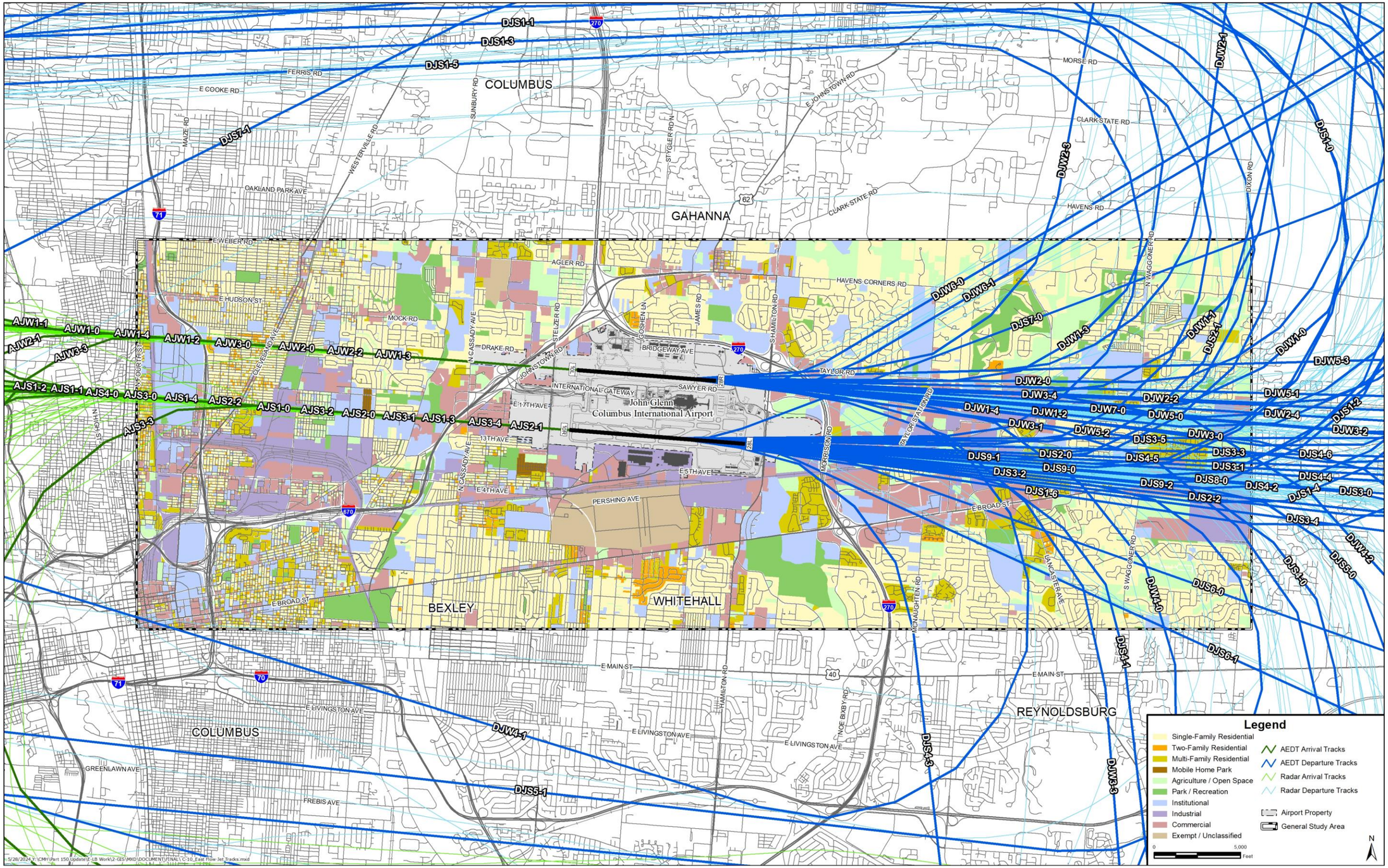
Flight Tracks: A flight track is the path over the ground as an aircraft flies to or from the airport. For this Part 150 Study, the existing flight tracks were evaluated to ensure that the flight tracks used in the modeling of aircraft noise are representative of where aircraft are flying at CMH. Flight track locations and percent distribution for the Existing (2024) Baseline noise exposure Contour was derived primarily from analysis of radar data from select periods between July 2022 and August 2023. This data was analyzed to verify the location, density, and width of existing flight corridors. Consolidated flight tracks were developed from this radar data and used in the AEDT to model the flight corridors present around the Airport.

Exhibit C-10, Exhibit C-11, and **Exhibit C-12** depict the flight corridors representative of arrival and departure flight corridors in east flow operations for all large jets, regional jets and propeller aircraft, respectively. **Exhibit C-13**, **Exhibit C-14**, and **Exhibit C-15** depict flight corridors for west flow operations for these aircraft types. **Exhibit C-16** depicts flight tracks representative of touch-and-go operations that touch down and take off again as one continuous event. This activity is typically conducted by small aircraft for training purposes.

In order to model the flight corridors in AEDT, consolidated flight tracks were developed from previous noise studies and the recent radar data. The flight tracks are composed of both backbone and sub-tracks that account for the dispersion of operations across a corridor of flight, rather than along a single constrained path. This is most useful at airports where wide flight corridors are present, such as are used by departures at CMH. The use of sub-tracks for the definition of baseline noise patterns allows a more definitive description of overall operating characteristics. **Table C-4**, **Table C-5**, and **Table C-6** provide the proportion of operations assigned to each of the flight tracks indicated on the exhibits for the Existing (2024) Baseline condition.

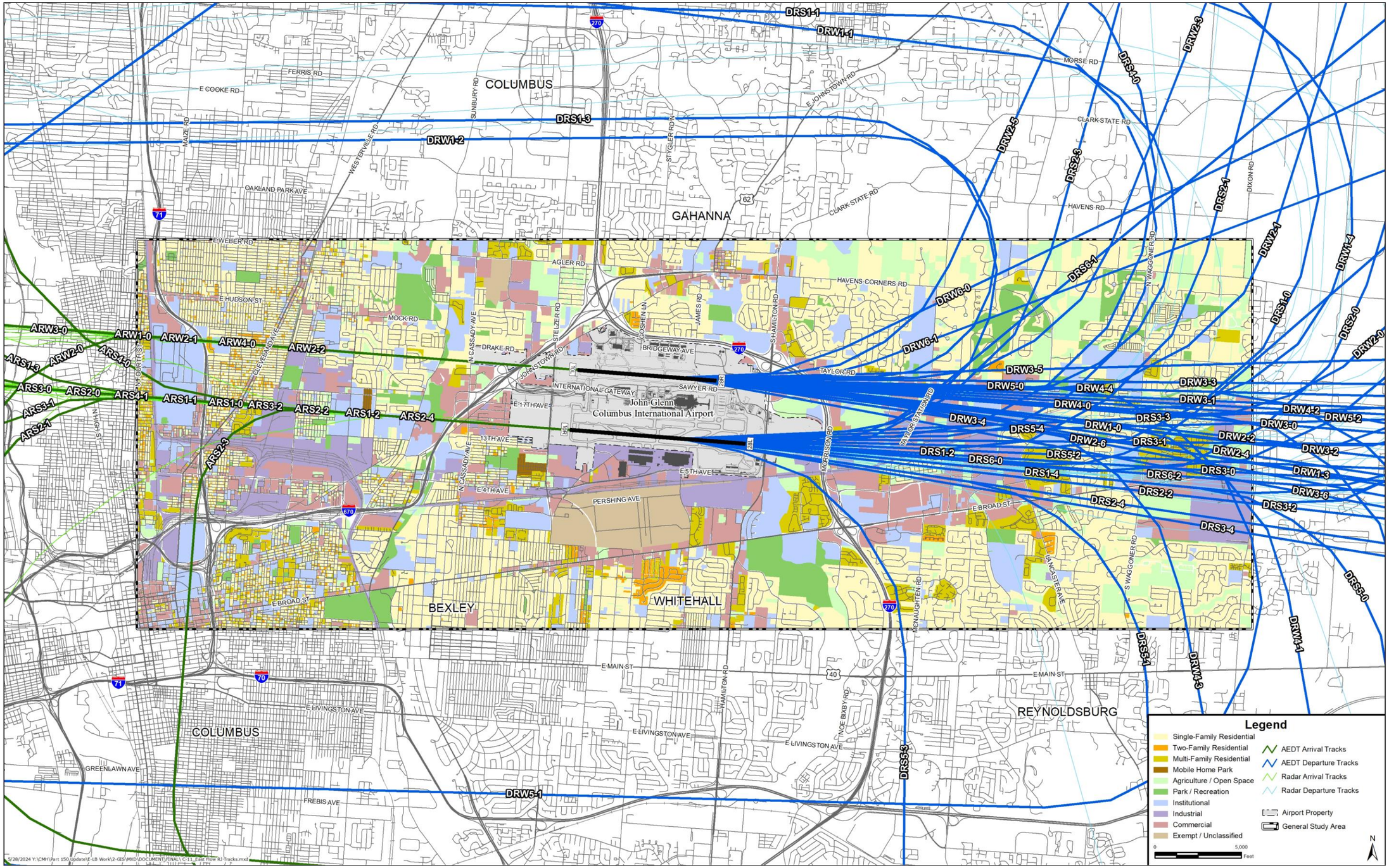
Current procedures instruct departures by jet aircraft to follow runway heading until reaching five miles or 4,000 feet Mean Sea Level (MSL) before turning on course. This results in aircraft being at a higher altitude before turning over residential land uses. A small number of jet departures are instructed to turn early by ATCT to permit simultaneous departures on both parallel runways. Jet aircraft may be turned up to 20 degrees if a traffic management unit (TMU) restricted aircraft would incur additional delay. Propeller aircraft departures, in both east and west flow, turn as soon as directed by ATCT to allow trailing jet aircraft to depart more quickly. The arrival corridors for jet and propeller aircraft generally follow a straight in procedure on their final approach for approximately five nautical miles.

Exhibit C-10 East Flow Large Jet Tracks



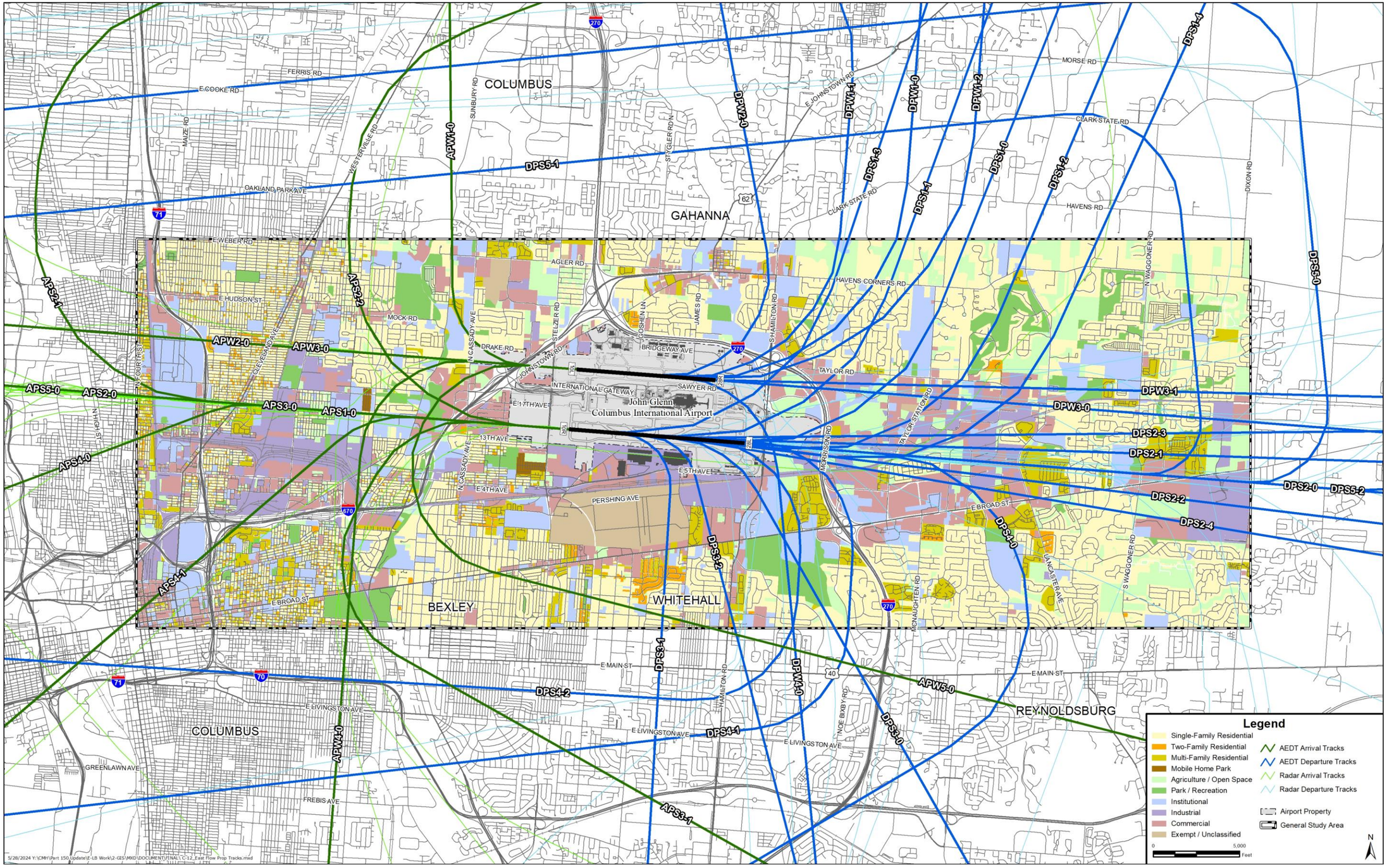
This page intentionally left blank

Exhibit C-11 East Flow Regional Jet Tracks



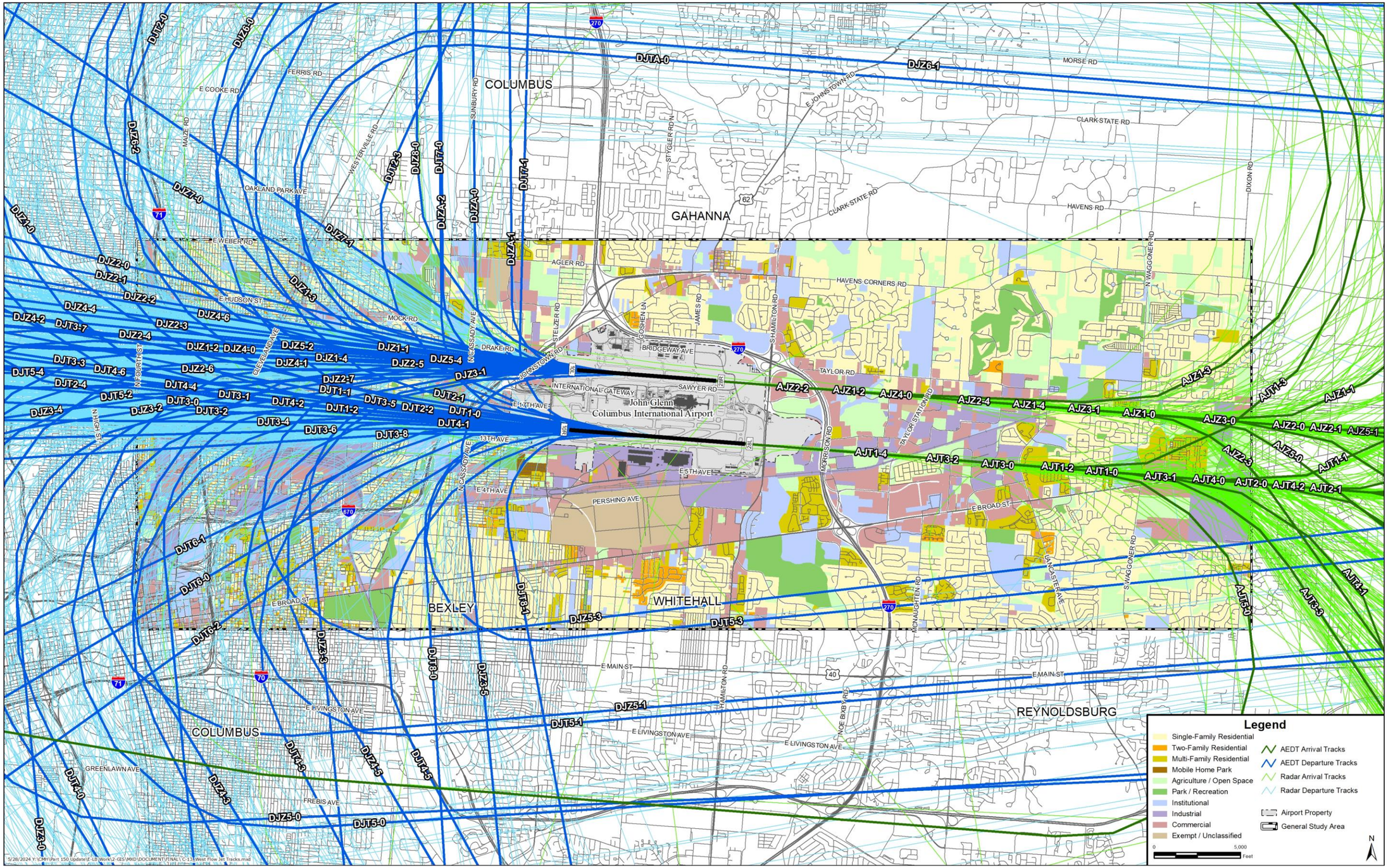
This page intentionally left blank

Exhibit C-12 East Flow Prop Aircraft Tracks



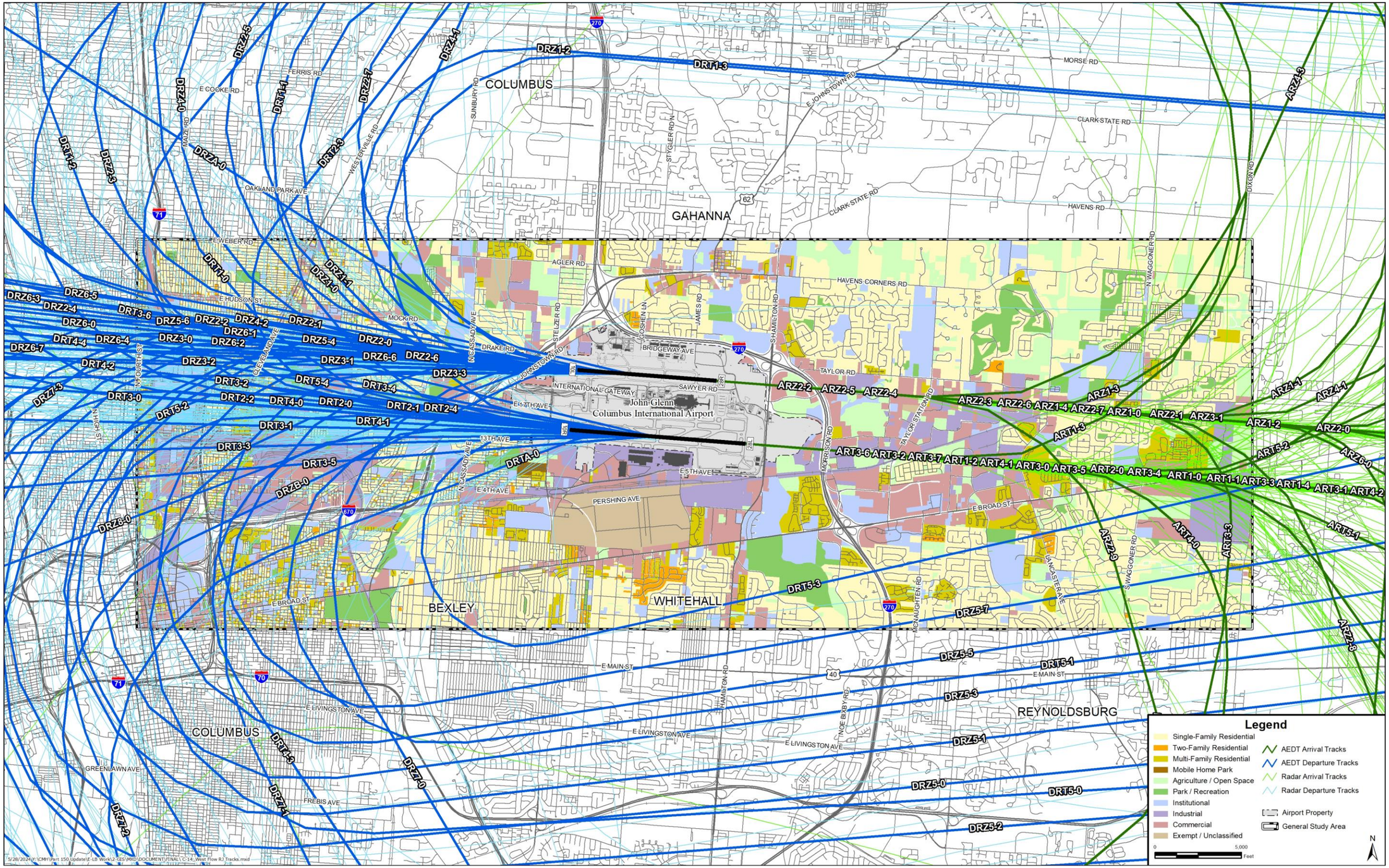
This page intentionally left blank

Exhibit C-13 West Flow Large Jet Tracks



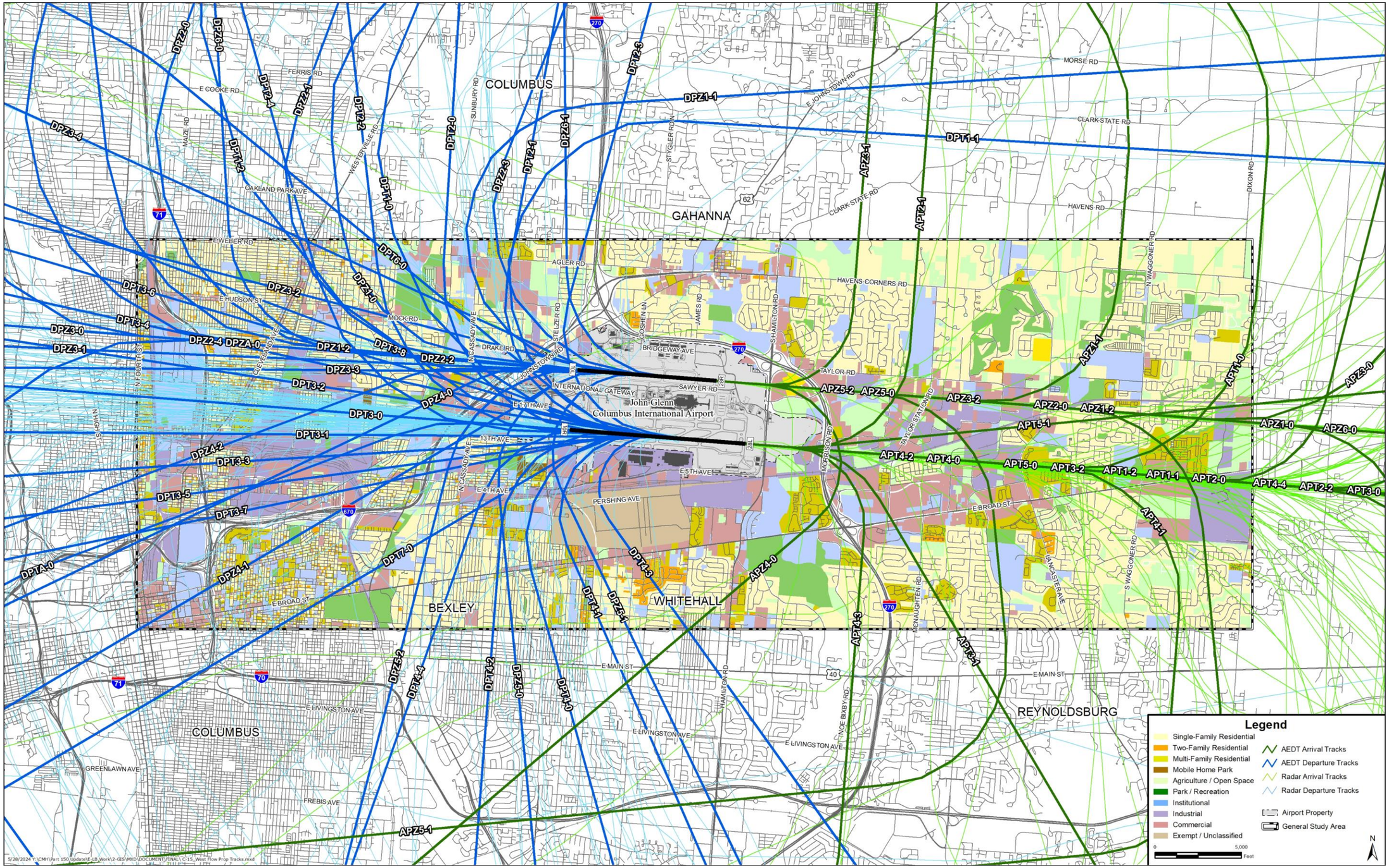
This page intentionally left blank

Exhibit C-14 West Flow Regional Jet Tracks



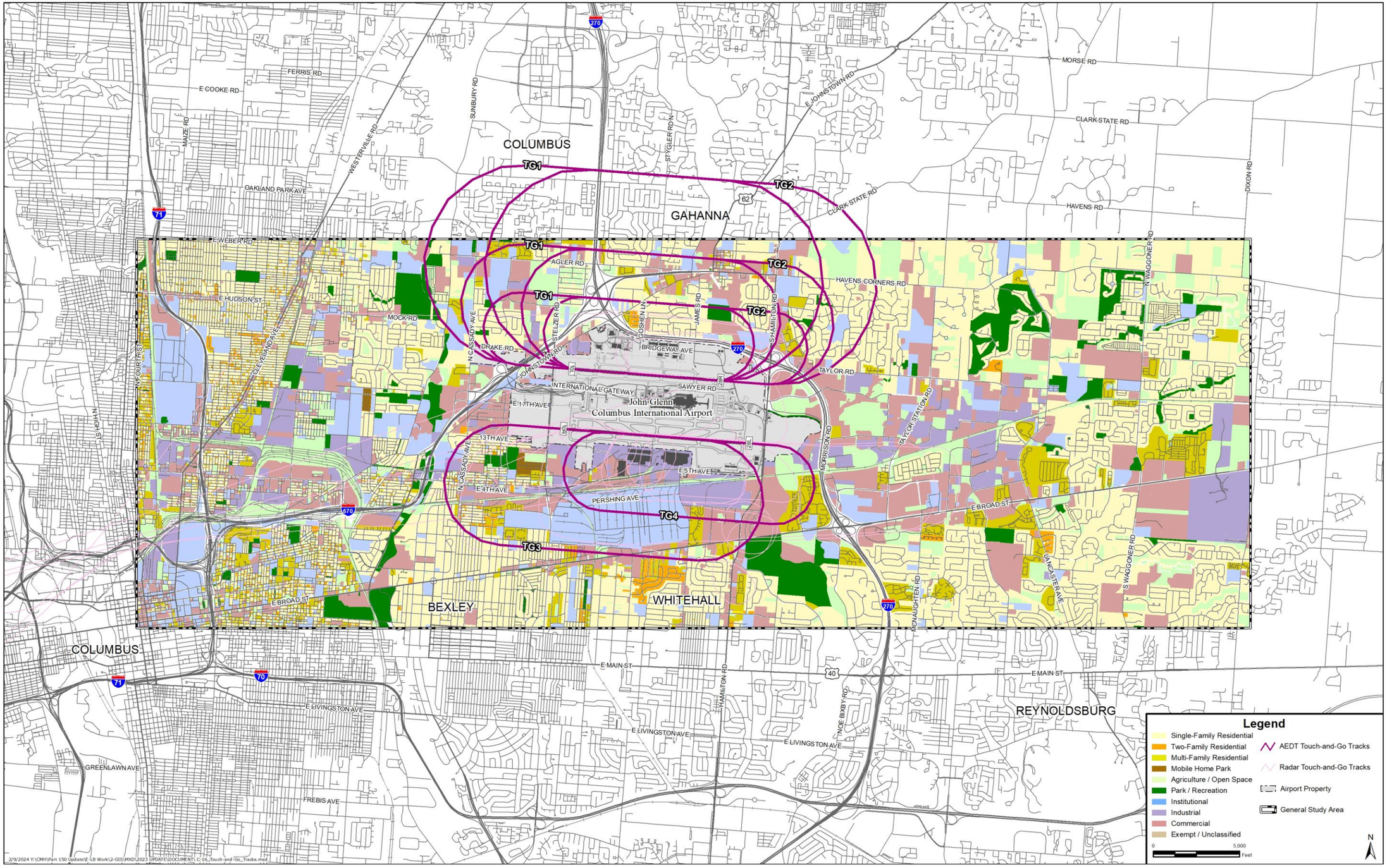
This page intentionally left blank

Exhibit C-15 West Flow Prop Aircraft Tracks



This page intentionally left blank

Exhibit C-16 Touch-and-Go Tracks



This page intentionally left blank

Table C-4 Existing (2024) Arrival Flight Track Utilization

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
10L	AJW1-0	0.80%	0.00%	0.00%	0.00%
	AJW1-1	0.80%	0.00%	0.00%	0.00%
	AJW1-2	0.80%	0.00%	0.00%	0.00%
	AJW1-3	0.48%	0.00%	0.00%	0.00%
	AJW1-4	0.32%	0.00%	0.00%	0.00%
	AJW2-0	0.16%	0.00%	0.00%	0.00%
	AJW2-1	0.21%	0.00%	0.00%	0.00%
	AJW2-2	0.03%	0.00%	0.00%	0.00%
	AJW3-0	1.91%	0.00%	0.00%	0.01%
	AJW3-1	1.60%	0.00%	0.00%	0.01%
	AJW3-2	1.60%	0.00%	0.00%	0.01%
	AJW3-3	1.28%	0.00%	0.00%	0.00%
	AJW4-0	0.40%	0.00%	0.00%	0.00%
	APW2-0	0.00%	0.00%	0.00%	2.08%
	APW3-0	0.00%	0.00%	0.00%	1.04%
	APW4-0	0.00%	0.00%	0.00%	1.04%
	ARW1-0	0.00%	6.81%	3.95%	0.00%
	ARW2-0	0.00%	2.04%	1.19%	0.00%
	ARW2-1	0.00%	1.53%	0.89%	0.00%
	ARW2-2	0.00%	1.53%	0.89%	0.00%
	ARW3-0	0.00%	3.40%	1.98%	0.00%
	ARW4-0	0.00%	1.70%	0.99%	0.00%
28R	AJZ1-0	3.70%	0.00%	0.00%	0.01%
	AJZ1-1	3.08%	0.00%	0.00%	0.01%
	AJZ1-2	3.08%	0.00%	0.00%	0.01%
	AJZ1-3	1.23%	0.00%	0.00%	0.00%
	AJZ1-4	1.23%	0.00%	0.00%	0.00%
	AJZ2-0	2.68%	0.00%	0.00%	0.01%
	AJZ2-1	3.66%	0.00%	0.00%	0.01%
	AJZ2-2	1.34%	0.00%	0.00%	0.00%
	AJZ2-3	8.51%	0.00%	0.00%	0.03%
	AJZ2-4	0.51%	0.00%	0.00%	0.00%
	AJZ3-0	0.51%	0.00%	0.00%	0.00%
	AJZ3-1	0.51%	0.00%	0.00%	0.00%
	AJZ4-0	1.88%	0.00%	0.00%	0.01%
	AJZ5-0	2.14%	0.00%	0.00%	0.01%
	AJZ5-1	2.17%	0.00%	0.00%	0.01%
	APZ1-0	0.00%	0.00%	0.00%	1.59%
	APZ1-1	0.00%	0.00%	0.00%	1.19%
	APZ1-2	0.00%	0.00%	0.00%	1.19%
	APZ2-0	0.00%	0.00%	0.00%	0.61%
	APZ3-0	0.00%	0.00%	0.00%	0.49%

Table C-4 Existing (2024) Arrival Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
28R	APZ3-1	0.00%	0.00%	0.00%	0.37%
	APZ3-2	0.00%	0.00%	0.00%	0.37%
	APZ4-0	0.00%	0.00%	0.00%	1.53%
	APZ5-0	0.00%	0.00%	0.00%	0.74%
	APZ5-1	0.00%	0.00%	0.00%	0.55%
	APZ5-2	0.00%	0.00%	0.00%	0.55%
	APZ6-0	0.00%	0.00%	0.00%	2.45%
	ARZ1-0	0.00%	5.83%	2.92%	0.00%
	ARZ1-1	0.00%	4.86%	2.43%	0.00%
	ARZ1-2	0.00%	4.86%	2.43%	0.00%
	ARZ1-3	0.00%	1.94%	0.97%	0.00%
	ARZ1-4	0.00%	1.94%	0.97%	0.00%
	ARZ2-0	0.00%	0.29%	0.14%	0.00%
	ARZ2-1	0.00%	0.29%	0.14%	0.00%
	ARZ2-2	0.00%	0.29%	0.14%	0.00%
	ARZ2-3	0.00%	1.14%	0.57%	0.00%
	ARZ2-4	0.00%	2.86%	1.43%	0.00%
	ARZ2-5	0.00%	5.15%	2.57%	0.00%
	ARZ2-6	0.00%	5.72%	2.86%	0.00%
	ARZ2-7	0.00%	7.72%	3.86%	0.00%
	ARZ2-8	0.00%	4.00%	2.00%	0.00%
	ARZ2-9	0.00%	1.14%	0.57%	0.00%
	ARZ3-0	0.00%	1.20%	0.60%	0.00%
	ARZ3-1	0.00%	1.00%	0.50%	0.00%
	ARZ3-2	0.00%	1.00%	0.50%	0.00%
	ARZ3-3	0.00%	0.40%	0.20%	0.00%
	ARZ3-4	0.00%	0.40%	0.20%	0.00%
	ARZ4-0	0.00%	2.06%	1.03%	0.00%
	ARZ4-1	0.00%	1.72%	0.86%	0.00%
	ARZ4-2	0.00%	1.72%	0.86%	0.00%
	ARZ4-3	0.00%	0.69%	0.34%	0.00%
	ARZ4-4	0.00%	0.69%	0.34%	0.00%
	ARZ5-0	0.00%	2.29%	1.14%	0.00%
	AJS1-0	0.72%	0.00%	0.00%	0.01%
	AJS1-1	0.61%	0.00%	0.00%	0.01%
	AJS1-2	0.61%	0.00%	0.00%	0.01%
	AJS1-3	0.23%	0.00%	0.00%	0.00%
	AJS1-4	0.23%	0.00%	0.00%	0.00%
	AJS2-0	1.64%	0.00%	0.00%	0.02%
	AJS2-1	0.84%	0.00%	0.00%	0.01%
	AJS2-2	0.30%	0.00%	0.00%	0.00%
	AJS3-0	1.66%	0.00%	0.00%	0.02%

Table C-4 Existing (2024) Arrival Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
10R	AJS3-1	1.66%	0.00%	0.00%	0.02%
	AJS3-2	1.66%	0.00%	0.00%	0.02%
	AJS3-3	2.45%	0.00%	0.00%	0.03%
	AJS3-4	0.69%	0.00%	0.00%	0.01%
	AJS5-0	0.21%	0.00%	0.00%	0.00%
	AJS5-1	0.15%	0.00%	0.00%	0.00%
	AJS5-2	0.15%	0.00%	0.00%	0.00%
	APS1-0	0.00%	0.00%	0.00%	6.99%
	APS2-0	0.00%	0.00%	0.00%	0.58%
	APS2-1	0.00%	0.00%	0.00%	0.58%
	APS2-2	0.00%	0.00%	0.00%	0.59%
	APS3-0	0.00%	0.00%	0.00%	1.75%
	APS3-1	0.00%	0.00%	0.00%	1.75%
	APS4-0	0.00%	0.00%	0.00%	2.62%
	APS4-1	0.00%	0.00%	0.00%	2.62%
	APS5-0	0.00%	0.00%	0.00%	2.62%
	ARS1-0	0.00%	0.21%	0.58%	0.00%
	ARS1-1	0.00%	0.35%	0.96%	0.00%
	ARS1-2	0.00%	0.33%	0.90%	0.00%
	ARS1-3	0.00%	0.17%	0.47%	0.00%
	ARS2-0	0.00%	0.87%	2.40%	0.00%
	ARS2-1	0.00%	0.87%	2.40%	0.00%
	ARS2-2	0.00%	0.20%	0.56%	0.00%
	ARS2-3	0.00%	0.87%	2.40%	0.00%
	ARS2-4	0.00%	0.09%	0.24%	0.00%
	ARS3-0	0.00%	0.32%	0.87%	0.00%
	ARS3-1	0.00%	0.24%	0.66%	0.00%
	ARS3-2	0.00%	0.24%	0.66%	0.00%
	ARS4-0	0.00%	0.18%	0.50%	0.00%
	ARS4-1	0.00%	0.08%	0.23%	0.00%
	AJT1-0	2.70%	0.00%	0.00%	0.04%
	AJT1-1	2.25%	0.00%	0.00%	0.03%
	AJT1-2	2.25%	0.00%	0.00%	0.03%
	AJT1-3	0.90%	0.00%	0.00%	0.01%
	AJT1-4	0.90%	0.00%	0.00%	0.01%
	AJT2-0	0.67%	0.00%	0.00%	0.01%
	AJT2-1	0.14%	0.00%	0.00%	0.00%
	AJT3-0	2.42%	0.00%	0.00%	0.03%
	AJT3-1	3.52%	0.00%	0.00%	0.05%
	AJT3-2	7.27%	0.00%	0.00%	0.10%
	AJT3-3	8.81%	0.00%	0.00%	0.12%
	AJT4-0	5.37%	0.00%	0.00%	0.08%

Table C-4 Existing (2024) Arrival Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
28L	AJT4-1	0.77%	0.00%	0.00%	0.01%
	AJT4-2	1.53%	0.00%	0.00%	0.02%
	AJT5-0	0.09%	0.00%	0.00%	0.00%
	APT1-0	0.00%	0.00%	0.00%	7.69%
	APT1-1	0.00%	0.00%	0.00%	5.77%
	APT1-2	0.00%	0.00%	0.00%	5.77%
	APT2-0	0.00%	0.00%	0.00%	2.18%
	APT2-1	0.00%	0.00%	0.00%	2.12%
	APT2-2	0.00%	0.00%	0.00%	2.12%
	APT3-0	0.00%	0.00%	0.00%	5.50%
	APT3-1	0.00%	0.00%	0.00%	6.41%
	APT3-2	0.00%	0.00%	0.00%	6.41%
	APT4-0	0.00%	0.00%	0.00%	4.81%
	APT4-1	0.00%	0.00%	0.00%	4.01%
	APT4-2	0.00%	0.00%	0.00%	4.01%
	APT4-3	0.00%	0.00%	0.00%	1.60%
	APT4-4	0.00%	0.00%	0.00%	1.60%
	APT5-0	0.00%	0.00%	0.00%	1.60%
	APT5-1	0.00%	0.00%	0.00%	1.60%
	ART1-0	0.00%	0.16%	0.43%	0.00%
	ART1-1	0.00%	0.35%	0.96%	0.00%
	ART1-2	0.00%	0.98%	2.67%	0.00%
	ART1-3	0.00%	1.25%	3.42%	0.00%
	ART1-4	0.00%	1.18%	3.20%	0.00%
	ART2-0	0.00%	0.65%	1.78%	0.00%
	ART3-0	0.00%	0.27%	0.74%	0.00%
	ART3-1	0.00%	0.45%	1.23%	0.00%
	ART3-2	0.00%	0.63%	1.72%	0.00%
	ART3-3	0.00%	1.81%	4.92%	0.00%
	ART3-4	0.00%	1.81%	4.92%	0.00%
	ART3-5	0.00%	2.26%	6.15%	0.00%
	ART3-6	0.00%	0.90%	2.46%	0.00%
	ART3-7	0.00%	0.90%	2.46%	0.00%
	ART4-0	0.00%	0.15%	0.40%	0.00%
	ART4-1	0.00%	0.57%	1.56%	0.00%
	ART4-2	0.00%	0.46%	1.25%	0.00%
	ART4-3	0.00%	0.46%	1.25%	0.00%
	ART5-0	0.00%	0.38%	1.04%	0.00%
	ART5-1	0.00%	0.99%	2.70%	0.00%
	ART5-2	0.00%	0.15%	0.42%	0.00%
Total		100.00%	100.00%	100%	100%

Source: CMH ANOMS data, Landrum & Brown analysis, 2024.

Table C-5 Existing (2024) Departure Flight Track Utilization

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
10L	DJW1-0	0.55%	0.00%	0.00%	0.00%
	DJW1-1	0.46%	0.00%	0.00%	0.00%
	DJW1-2	0.46%	0.00%	0.00%	0.00%
	DJW1-3	0.19%	0.00%	0.00%	0.00%
	DJW1-4	0.19%	0.00%	0.00%	0.00%
	DJW2-0	1.24%	0.00%	0.00%	0.00%
	DJW2-1	0.71%	0.00%	0.00%	0.00%
	DJW2-2	1.07%	0.00%	0.00%	0.00%
	DJW2-3	0.18%	0.00%	0.00%	0.00%
	DJW2-4	0.35%	0.00%	0.00%	0.00%
	DJW3-0	0.52%	0.00%	0.00%	0.00%
	DJW3-1	1.10%	0.00%	0.00%	0.00%
	DJW3-2	0.27%	0.00%	0.00%	0.00%
	DJW3-3	0.20%	0.00%	0.00%	0.00%
	DJW3-4	0.15%	0.00%	0.00%	0.00%
	DJW4-0	0.15%	0.00%	0.00%	0.00%
	DJW4-1	0.16%	0.00%	0.00%	0.00%
	DJW4-2	0.07%	0.00%	0.00%	0.00%
	DJW5-0	0.55%	0.00%	0.00%	0.00%
	DJW5-1	0.40%	0.00%	0.00%	0.00%
	DJW5-2	0.40%	0.00%	0.00%	0.00%
	DJW5-3	0.23%	0.00%	0.00%	0.00%
	DJW6-0	0.98%	0.00%	0.00%	0.00%
	DJW6-1	1.01%	0.00%	0.00%	0.00%
	DJW7-0	0.13%	0.00%	0.00%	0.00%
	DPW3-0	0.00%	0.00%	0.00%	1.05%
	DPW3-1	0.00%	0.00%	0.00%	1.05%
	DPW4-0	0.00%	0.00%	0.00%	2.09%
	DRW1-0	0.00%	2.58%	1.44%	0.00%
	DRW1-1	0.00%	2.58%	1.44%	0.00%
	DRW1-2	0.00%	1.03%	0.58%	0.00%
	DRW1-3	0.00%	1.03%	0.58%	0.00%
	DRW1-4	0.00%	3.10%	1.73%	0.00%
	DRW2-0	0.00%	0.77%	0.43%	0.00%
	DRW2-1	0.00%	0.52%	0.29%	0.00%
	DRW2-2	0.00%	0.52%	0.29%	0.00%
	DRW2-3	0.00%	0.26%	0.14%	0.00%
	DRW2-4	0.00%	0.26%	0.14%	0.00%
	DRW2-5	0.00%	0.13%	0.07%	0.00%
	DRW2-6	0.00%	0.13%	0.07%	0.00%
	DRW3-0	0.00%	1.55%	0.86%	0.00%
	DRW3-1	0.00%	1.03%	0.58%	0.00%

Table C-5 Existing (2024) Departure Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
10L	DRW3-2	0.00%	1.03%	0.58%	0.00%
	DRW3-3	0.00%	0.52%	0.29%	0.00%
	DRW3-4	0.00%	0.52%	0.29%	0.00%
	DRW3-5	0.00%	0.26%	0.14%	0.00%
	DRW3-6	0.00%	0.26%	0.14%	0.00%
28R	DJZ1-0	6.29%	0.00%	0.00%	0.02%
	DJZ1-1	3.14%	0.00%	0.00%	0.01%
	DJZ1-2	3.14%	0.00%	0.00%	0.01%
	DJZ1-3	1.57%	0.00%	0.00%	0.00%
	DJZ1-4	1.57%	0.00%	0.00%	0.00%
	DJZ2-0	0.10%	0.00%	0.00%	0.00%
	DJZ2-1	0.20%	0.00%	0.00%	0.00%
	DJZ2-2	0.31%	0.00%	0.00%	0.00%
	DJZ2-3	0.81%	0.00%	0.00%	0.00%
	DJZ2-4	2.54%	0.00%	0.00%	0.01%
	DJZ2-5	3.15%	0.00%	0.00%	0.01%
	DJZ2-6	2.54%	0.00%	0.00%	0.01%
	DJZ2-7	0.51%	0.00%	0.00%	0.00%
	DJZ3-0	0.19%	0.00%	0.00%	0.00%
	DJZ3-1	0.16%	0.00%	0.00%	0.00%
	DJZ3-2	0.16%	0.00%	0.00%	0.00%
	DJZ3-3	0.05%	0.00%	0.00%	0.00%
	DJZ3-4	0.05%	0.00%	0.00%	0.00%
	DJZ3-5	0.03%	0.00%	0.00%	0.00%
	DJZ4-0	2.13%	0.00%	0.00%	0.01%
	DJZ4-1	1.71%	0.00%	0.00%	0.01%
	DJZ4-2	1.71%	0.00%	0.00%	0.01%
	DJZ4-3	1.28%	0.00%	0.00%	0.00%
	DJZ4-4	1.28%	0.00%	0.00%	0.00%
	DJZ4-5	0.21%	0.00%	0.00%	0.00%
	DJZ4-6	0.21%	0.00%	0.00%	0.00%
	DJZ5-0	0.41%	0.00%	0.00%	0.00%
	DJZ5-1	0.34%	0.00%	0.00%	0.00%
	DJZ5-2	0.34%	0.00%	0.00%	0.00%
	DJZ5-3	0.14%	0.00%	0.00%	0.00%
	DJZ5-4	0.14%	0.00%	0.00%	0.00%
	DJZ6-0	0.96%	0.00%	0.00%	0.00%
	DJZ6-1	0.48%	0.00%	0.00%	0.00%
	DJZ6-2	0.48%	0.00%	0.00%	0.00%
	DJZ7-0	0.04%	0.00%	0.00%	0.00%
	DJZ7-1	0.04%	0.00%	0.00%	0.00%
	DJZ8-0	0.28%	0.00%	0.00%	0.00%

Table C-5 Existing (2024) Departure Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
28R	DJZA-0	0.41%	0.00%	0.00%	0.00%
	DJZA-1	0.06%	0.00%	0.00%	0.00%
	DJZA-2	0.17%	0.00%	0.00%	0.00%
	DPZ1-0	0.00%	0.00%	0.00%	0.59%
	DPZ1-1	0.00%	0.00%	0.00%	0.57%
	DPZ1-2	0.00%	0.00%	0.00%	0.57%
	DPZ2-0	0.00%	0.00%	0.00%	0.52%
	DPZ2-1	0.00%	0.00%	0.00%	0.34%
	DPZ2-2	0.00%	0.00%	0.00%	0.34%
	DPZ2-3	0.00%	0.00%	0.00%	0.26%
	DPZ2-4	0.00%	0.00%	0.00%	0.26%
	DPZ3-0	0.00%	0.00%	0.00%	1.68%
	DPZ3-1	0.00%	0.00%	0.00%	1.12%
	DPZ3-2	0.00%	0.00%	0.00%	1.12%
	DPZ3-3	0.00%	0.00%	0.00%	0.84%
	DPZ3-4	0.00%	0.00%	0.00%	0.84%
	DPZ5-0	0.00%	0.00%	0.00%	0.65%
	DPZ5-1	0.00%	0.00%	0.00%	0.86%
	DPZ5-2	0.00%	0.00%	0.00%	0.65%
	DPZ6-0	0.00%	0.00%	0.00%	0.43%
	DPZ6-1	0.00%	0.00%	0.00%	0.43%
	DPZA-0	0.00%	0.00%	0.00%	0.86%
	DRZ1-0	0.00%	0.64%	0.33%	0.00%
	DRZ1-1	0.00%	1.28%	0.66%	0.00%
	DRZ1-2	0.00%	1.03%	0.53%	0.00%
	DRZ2-0	0.00%	3.53%	1.81%	0.00%
	DRZ2-1	0.00%	2.12%	1.08%	0.00%
	DRZ2-2	0.00%	2.12%	1.08%	0.00%
	DRZ2-3	0.00%	1.41%	0.72%	0.00%
	DRZ2-4	0.00%	1.41%	0.72%	0.00%
	DRZ2-5	0.00%	0.58%	0.30%	0.00%
	DRZ2-6	0.00%	0.32%	0.16%	0.00%
	DRZ2-7	0.00%	0.26%	0.13%	0.00%
	DRZ3-0	0.00%	1.22%	0.62%	0.00%
	DRZ3-1	0.00%	4.30%	2.20%	0.00%
	DRZ3-2	0.00%	3.21%	1.64%	0.00%
	DRZ3-3	0.00%	1.54%	0.79%	0.00%
	DRZ4-0	0.00%	1.86%	0.95%	0.00%
	DRZ4-1	0.00%	1.99%	1.02%	0.00%
	DRZ4-2	0.00%	7.97%	4.08%	0.00%
	DRZ5-0	0.00%	0.19%	0.10%	0.00%
	DRZ5-1	0.00%	0.45%	0.23%	0.00%

Table C-5 Existing (2024) Departure Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
28R	DRZ5-2	0.00%	0.32%	0.16%	0.00%
	DRZ5-3	0.00%	0.45%	0.23%	0.00%
	DRZ5-4	0.00%	0.06%	0.03%	0.00%
	DRZ5-5	0.00%	0.26%	0.13%	0.00%
	DRZ5-6	0.00%	0.13%	0.07%	0.00%
	DRZ5-7	0.00%	0.06%	0.03%	0.00%
	DRZ6-0	0.00%	0.39%	0.20%	0.00%
	DRZ6-1	0.00%	0.51%	0.26%	0.00%
	DRZ6-2	0.00%	1.03%	0.53%	0.00%
	DRZ6-3	0.00%	1.03%	0.53%	0.00%
	DRZ6-4	0.00%	0.90%	0.46%	0.00%
	DRZ6-5	0.00%	0.32%	0.16%	0.00%
	DRZ6-6	0.00%	0.13%	0.07%	0.00%
	DRZ6-7	0.00%	0.06%	0.03%	0.00%
	DRZ7-0	0.00%	3.21%	1.64%	0.00%
	DRZ7-1	0.00%	5.65%	2.89%	0.00%
	DRZ7-2	0.00%	4.88%	2.50%	0.00%
	DRZ7-3	0.00%	1.61%	0.82%	0.00%
	DRZ7-4	0.00%	0.84%	0.43%	0.00%
	DRZ8-0	0.00%	0.51%	0.26%	0.00%
	DRZA-0	0.00%	0.51%	0.26%	0.00%
	DRZB-0	0.00%	3.92%	2.01%	0.00%
10R	DJS1-0	0.75%	0.00%	0.00%	0.01%
	DJS1-1	0.60%	0.00%	0.00%	0.01%
	DJS1-2	0.60%	0.00%	0.00%	0.01%
	DJS1-3	0.45%	0.00%	0.00%	0.01%
	DJS1-4	0.45%	0.00%	0.00%	0.01%
	DJS1-5	0.08%	0.00%	0.00%	0.00%
	DJS1-6	0.08%	0.00%	0.00%	0.00%
	DJS2-0	0.31%	0.00%	0.00%	0.00%
	DJS2-1	0.21%	0.00%	0.00%	0.00%
	DJS2-2	0.12%	0.00%	0.00%	0.00%
	DJS3-0	0.33%	0.00%	0.00%	0.01%
	DJS3-1	0.28%	0.00%	0.00%	0.00%
	DJS3-2	0.28%	0.00%	0.00%	0.00%
	DJS3-3	0.09%	0.00%	0.00%	0.00%
	DJS3-4	0.12%	0.00%	0.00%	0.00%
	DJS3-5	0.02%	0.00%	0.00%	0.00%
	DJS4-0	1.28%	0.00%	0.00%	0.02%
	DJS4-1	1.06%	0.00%	0.00%	0.02%
	DJS4-2	1.06%	0.00%	0.00%	0.02%
	DJS4-3	0.21%	0.00%	0.00%	0.00%

Table C-5 Existing (2024) Departure Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
10R	DJS4-4	0.21%	0.00%	0.00%	0.00%
	DJS4-5	0.20%	0.00%	0.00%	0.00%
	DJS4-6	0.21%	0.00%	0.00%	0.00%
	DJS5-0	0.63%	0.00%	0.00%	0.01%
	DJS5-1	0.63%	0.00%	0.00%	0.01%
	DJS7-0	0.38%	0.00%	0.00%	0.01%
	DJS7-1	0.57%	0.00%	0.00%	0.01%
	DJS8-0	0.16%	0.00%	0.00%	0.00%
	DJS9-0	0.06%	0.00%	0.00%	0.00%
	DJS9-1	0.06%	0.00%	0.00%	0.00%
	DJS9-2	0.06%	0.00%	0.00%	0.00%
	DPS1-0	0.00%	0.00%	0.00%	0.43%
	DPS1-1	0.00%	0.00%	0.00%	0.24%
	DPS1-2	0.00%	0.00%	0.00%	0.24%
	DPS1-3	0.00%	0.00%	0.00%	0.24%
	DPS1-4	0.00%	0.00%	0.00%	0.05%
	DPS2-0	0.00%	0.00%	0.00%	1.78%
	DPS2-1	0.00%	0.00%	0.00%	1.48%
	DPS2-2	0.00%	0.00%	0.00%	1.48%
	DPS2-3	0.00%	0.00%	0.00%	0.59%
	DPS2-4	0.00%	0.00%	0.00%	0.59%
	DPS3-0	0.00%	0.00%	0.00%	0.95%
	DPS3-1	0.00%	0.00%	0.00%	0.71%
	DPS3-2	0.00%	0.00%	0.00%	0.71%
	DPS4-0	0.00%	0.00%	0.00%	1.90%
	DPS4-1	0.00%	0.00%	0.00%	1.42%
	DPS4-2	0.00%	0.00%	0.00%	1.42%
	DPS5-0	0.00%	0.00%	0.00%	2.02%
	DPS5-1	0.00%	0.00%	0.00%	1.96%
	DPS5-2	0.00%	0.00%	0.00%	1.96%
	DRS1-0	0.00%	0.11%	0.36%	0.00%
	DRS1-1	0.00%	0.26%	0.88%	0.00%
	DRS1-2	0.00%	0.42%	1.45%	0.00%
	DRS1-3	0.00%	0.29%	1.00%	0.00%
	DRS1-4	0.00%	0.09%	0.32%	0.00%
	DRS2-0	0.00%	0.42%	1.45%	0.00%
	DRS2-1	0.00%	0.29%	1.00%	0.00%
	DRS2-2	0.00%	0.27%	0.92%	0.00%
	DRS2-3	0.00%	0.14%	0.48%	0.00%
	DRS2-4	0.00%	0.05%	0.16%	0.00%
	DRS3-0	0.00%	0.42%	1.44%	0.00%
	DRS3-1	0.00%	0.36%	1.24%	0.00%

Table C-5 Existing (2024) Departure Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
10R	DRS3-2	0.00%	0.16%	0.54%	0.00%
	DRS3-3	0.00%	0.02%	0.07%	0.00%
	DRS3-4	0.00%	0.02%	0.07%	0.00%
	DRS5-0	0.00%	0.14%	0.50%	0.00%
	DRS5-1	0.00%	0.14%	0.47%	0.00%
	DRS5-2	0.00%	0.06%	0.21%	0.00%
	DRS5-3	0.00%	0.04%	0.12%	0.00%
	DRS5-4	0.00%	0.01%	0.04%	0.00%
	DRS6-0	0.00%	0.07%	0.23%	0.00%
	DRS6-1	0.00%	0.06%	0.22%	0.00%
	DRS6-2	0.00%	0.06%	0.22%	0.00%
28L	DJT1-0	0.75%	0.00%	0.00%	0.01%
	DJT1-1	0.37%	0.00%	0.00%	0.01%
	DJT1-2	0.37%	0.00%	0.00%	0.01%
	DJT2-0	2.13%	0.00%	0.00%	0.03%
	DJT2-1	1.83%	0.00%	0.00%	0.03%
	DJT2-2	1.20%	0.00%	0.00%	0.02%
	DJT2-3	0.37%	0.00%	0.00%	0.01%
	DJT2-4	0.56%	0.00%	0.00%	0.01%
	DJT3-0	3.96%	0.00%	0.00%	0.06%
	DJT3-1	1.98%	0.00%	0.00%	0.03%
	DJT3-2	1.98%	0.00%	0.00%	0.03%
	DJT3-3	1.35%	0.00%	0.00%	0.02%
	DJT3-4	1.35%	0.00%	0.00%	0.02%
	DJT3-5	1.35%	0.00%	0.00%	0.02%
	DJT3-6	0.67%	0.00%	0.00%	0.01%
	DJT3-7	0.34%	0.00%	0.00%	0.00%
	DJT3-8	0.34%	0.00%	0.00%	0.00%
	DJT4-0	3.55%	0.00%	0.00%	0.05%
	DJT4-1	2.36%	0.00%	0.00%	0.03%
	DJT4-2	2.36%	0.00%	0.00%	0.03%
	DJT4-3	1.20%	0.00%	0.00%	0.02%
	DJT4-4	1.20%	0.00%	0.00%	0.02%
	DJT4-5	0.60%	0.00%	0.00%	0.01%
	DJT4-6	0.60%	0.00%	0.00%	0.01%
	DJT5-0	0.34%	0.00%	0.00%	0.00%
	DJT5-1	0.26%	0.00%	0.00%	0.00%
	DJT5-2	0.26%	0.00%	0.00%	0.00%
	DJT5-3	0.07%	0.00%	0.00%	0.00%
	DJT5-4	0.07%	0.00%	0.00%	0.00%
	DJT5-5	0.04%	0.00%	0.00%	0.00%
	DJT6-0	1.05%	0.00%	0.00%	0.02%

Table C-5 Existing (2024) Departure Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
28L	DJT6-1	0.52%	0.00%	0.00%	0.01%
	DJT6-2	0.52%	0.00%	0.00%	0.01%
	DJT7-0	0.15%	0.00%	0.00%	0.00%
	DJT7-1	0.04%	0.00%	0.00%	0.00%
	DJT8-0	0.60%	0.00%	0.00%	0.01%
	DJT8-1	0.15%	0.00%	0.00%	0.00%
	DJTA-0	0.56%	0.00%	0.00%	0.01%
	DPT1-0	0.00%	0.00%	0.00%	2.98%
	DPT1-1	0.00%	0.00%	0.00%	2.24%
	DPT1-2	0.00%	0.00%	0.00%	2.24%
	DPT2-0	0.00%	0.00%	0.00%	2.37%
	DPT2-1	0.00%	0.00%	0.00%	1.97%
	DPT2-2	0.00%	0.00%	0.00%	1.97%
	DPT2-3	0.00%	0.00%	0.00%	0.79%
	DPT2-4	0.00%	0.00%	0.00%	0.79%
	DPT3-0	0.00%	0.00%	0.00%	5.37%
	DPT3-1	0.00%	0.00%	0.00%	4.30%
	DPT3-2	0.00%	0.00%	0.00%	4.30%
	DPT3-3	0.00%	0.00%	0.00%	2.15%
	DPT3-4	0.00%	0.00%	0.00%	2.15%
	DPT3-5	0.00%	0.00%	0.00%	1.07%
	DPT3-6	0.00%	0.00%	0.00%	1.07%
	DPT3-7	0.00%	0.00%	0.00%	0.54%
	DPT3-8	0.00%	0.00%	0.00%	0.54%
	DPT4-0	0.00%	0.00%	0.00%	2.76%
	DPT4-1	0.00%	0.00%	0.00%	2.30%
	DPT4-2	0.00%	0.00%	0.00%	2.30%
	DPT4-3	0.00%	0.00%	0.00%	0.92%
	DPT4-4	0.00%	0.00%	0.00%	0.92%
	DPT7-0	0.00%	0.00%	0.00%	0.44%
	DPTA-0	0.00%	0.00%	0.00%	15.34%
	DRT1-0	0.00%	0.46%	1.46%	0.00%
	DRT1-1	0.00%	0.39%	1.25%	0.00%
	DRT1-2	0.00%	0.38%	1.20%	0.00%
	DRT1-3	0.00%	0.41%	1.30%	0.00%
	DRT2-0	0.00%	0.09%	0.29%	0.00%
	DRT2-1	0.00%	0.15%	0.49%	0.00%
	DRT2-2	0.00%	0.83%	2.62%	0.00%
	DRT2-3	0.00%	1.29%	4.08%	0.00%
	DRT2-4	0.00%	0.70%	2.23%	0.00%
	DRT3-0	0.00%	1.15%	3.64%	0.00%
	DRT3-1	0.00%	0.96%	3.03%	0.00%

Table C-5 Existing (2024) Departure Flight Track Utilization, *(Continued)*

Runway End	Track ID	Aircraft Category			
		Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
28L	DRT3-2	0.00%	0.96%	3.03%	0.00%
	DRT3-3	0.00%	0.31%	0.97%	0.00%
	DRT3-4	0.00%	0.31%	0.97%	0.00%
	DRT3-5	0.00%	0.08%	0.24%	0.00%
	DRT3-6	0.00%	0.08%	0.24%	0.00%
	DRT4-0	0.00%	0.36%	1.14%	0.00%
	DRT4-1	0.00%	0.65%	2.06%	0.00%
	DRT4-2	0.00%	1.19%	3.77%	0.00%
	DRT4-3	0.00%	1.26%	4.00%	0.00%
	DRT4-4	0.00%	0.14%	0.46%	0.00%
	DRT5-0	0.00%	0.25%	0.78%	0.00%
	DRT5-1	0.00%	0.33%	1.06%	0.00%
	DRT5-2	0.00%	0.23%	0.72%	0.00%
	DRT5-3	0.00%	0.07%	0.22%	0.00%
	DRT5-4	0.00%	0.11%	0.34%	0.00%
	DRTA-0	0.00%	0.66%	2.08%	0.00%
Total		100.00%	100.00%	100.00%	100.00%

Source: CMH ANOMS data, Landrum & Brown analysis, 2024.

Table C-6 Existing (2024) Touch-and-Go Flight Track Utilization

Runway End	Track ID	Aircraft Category				
		Large Jet	Regional / Air Taxi Jet	Commuter / Air Taxi Prop	General Aviation Jet	General Aviation Prop
10L	TG1	n/a				18.0%
28R	TG2					57.0%
10R	TG3					6.0%
28L	TG4					19.0%

Source: Landrum & Brown, 2024.

Aircraft Weight and Departure Stage Length: Aircraft weight upon departure is a factor in the dispersion of noise because it impacts the rate at which an aircraft is able to climb. Generally, heavier aircraft have a slower rate of climb and a wider dispersion of noise along the flight route. Where specific aircraft weights are unknown, the AEDT uses the distance flown to the first stop as a surrogate for the weight, by assuming that the weight has a direct relationship with the fuel load necessary to reach the first destination. The AEDT groups trip lengths into eleven stage categories and assigns standard aircraft weights to each stage category. These categories are:

Stage Category	Stage Length
1	0-500 nautical miles
2	501-1000 nautical miles
3	1001-1500 nautical miles
4	1501-2500 nautical miles
5	2501-3500 nautical miles
6	3501-4500 nautical miles
7	4501-5500 nautical miles
8	5501-6500 nautical miles
9	6501-7500 nautical miles
10	7501-8500 nautical miles
11	8500+ nautical miles

Destinations within a stage length of one include Atlanta, Chicago, Detroit, New York, Philadelphia, and Washington, DC. Destinations within a stage length of two include Boston, Dallas, Houston, Minneapolis, and south Florida. Destinations within a stage length of three include Denver, Phoenix, and Salt Lake City. Destinations within a stage length of four include Las Vegas, Los Angeles, San Francisco, and Seattle. There are no scheduled operations at CMH to destinations with a stage length of five or greater.

The stage lengths modeled for the Existing (2024) Baseline Noise Exposure Contour are based upon a review of existing schedules and typical destinations for current conditions at CMH. **Table C-7** indicates the proportion of the operations that were modeled within each of the stage length categories for Existing (2024) Baseline Noise Exposure Contour.

Table C-7 Existing (2024) Stage Lengths

Stage Length Category	Large Jet	Regional / Air Taxi Jet	Commuter / Air Taxi Prop	General Aviation Jet	General Aviation Prop
1	60.9%	91.1%	100.0%	98.9%	100.0%
2	27.2%	8.9%	0.0%	1.1%	0.0%
3	6.0%	0.0%	0.0%	0.0%	0.0%
4	5.8%	0.0%	0.0%	0.0%	0.0%
5	0.0%	0.0%	0.0%	0.0%	0.0%
6	0.0%	0.0%	0.0%	0.0%	0.0%
7	0.0%	0.0%	0.0%	0.0%	0.0%
8	0.0%	0.0%	0.0%	0.0%	0.0%
9	0.0%	0.0%	0.0%	0.0%	0.0%
10	0.0%	0.0%	0.0%	0.0%	0.0%
11	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Official Airline Guide (OAG) data, Landrum & Brown analysis, 2024.

Ground Run-up Noise: Engine run-ups are primarily performed on regional jet and general aviation jet aircraft for maintenance purposes. These run-ups occur at three locations at CMH described below and shown on **Exhibit C-17**. In order to model noise from aircraft engine run-ups, aircraft run-up locations and times were obtained from run-up logs collected by the CRAA. Standard practices require aircraft operators to log run-ups that occur at night (10:00pm to 6:59am). For modeling purposes, it was assumed an additional percentage of run-ups occur during the daytime. **Table C-8** shows the number, types, and the duration of engine run-ups that were modeled for the Existing (2024) Baseline conditions.

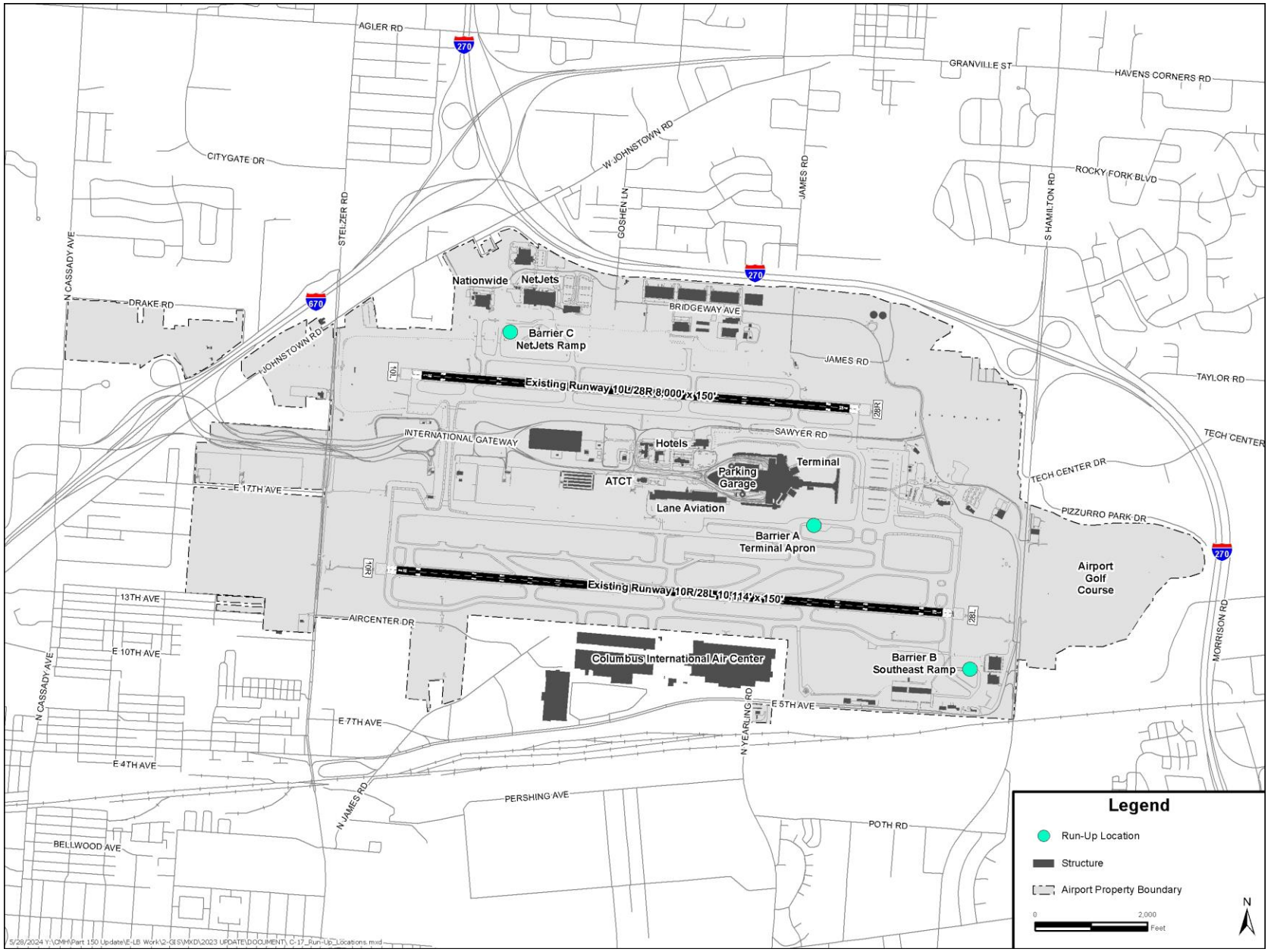
- **Barrier A / Terminal Apron:** Located to the south of Concourse B, along the south edge of the terminal apron. Aircraft face either east or west, parallel to the wall, and are positioned on the north side of the barrier.
- **Barrier B / Southeast Ramp:** Located just north of the southeast end of Taxiway G. Aircraft face east (preferred) or west between the two sound barrier walls. The majority of run-ups occur here due to the proximity to the Republic Airlines maintenance hangar.
- **Barrier C / NetJets Ramp:** Located on the north airfield near the NetJets ramp, north of Runway 10L/28R. Aircraft face either east or west, parallel to the wall, and are positioned on the south side of the barrier.

Table C-8 Existing (2024) Run-Up Operations

Run-Up Location	Aircraft ANP ID	Annual Runups			Duration (minutes)	Thrust Setting
		Daytime	Nighttime	Total		
Southeast Ramp Area	CRJ9-ER	55	18	73	5:11	80%
Southeast Ramp Area	EMB145	176	59	235	5:00	80%
NetJets Ramp Area	CNA560U	29	10	39	6:48	80%
NetJets Ramp Area	CNA680	52	17	69	4:15	80%
Terminal Apron	EMB145	39	13	52	9:27	80%
Terminal Apron	EMB175	21	7	28	4:10	80%
Total		**372**	**124**	**496**		

Source: CRAA Run-Up Logs, Landrum & Brown, 2024.

Exhibit C-17 Run-Up Locations



This page intentionally left blank

C.5.2 Future (2029) Baseline Noise Exposure Contour Input Data

The following sections provide the input data for the Future (2029) Baseline Noise Exposure Contour.

Runway Definition: The runway layout is not expected to change by 2029 at CMH; therefore, the same runway layout discussed for the Existing (2024) Baseline Noise Exposure Contour was used to model the Future (2029) Baseline Noise Exposure Contour.

Number of Operations and Fleet Mix: The number of future annual operations at CMH was based on the FAA-Draft Terminal Area Forecast (TAF) that was released in July 2023. The Future (2029) conditions include 142,601 annual operations to occur at CMH. When divided by 365, the result is 390.7 average-annual day operations, an increase of 20.4 percent from the Existing (2024) Noise Exposure Contour operating levels. **Table C-9**, which provides a summary of the forecasted average annual day operations by aircraft category and time of day, shows that large passenger jets make up the majority (69.4 percent) of all operations at CMH for the Future (2029) Baseline period.

A fleet mix forecast was prepared based on the draft TAF from July 2023 for this Part-150 Study. **Table C-10** shows the forecasted average daily number of arrivals and departures by the individual aircraft types that were modeled for the Future (2029) Baseline noise exposure contour.

Table C-9 Summary of Average-Annual Day Operations – Future (2029) Baseline

Aircraft Type	Arrivals		Departures		Total	Percent of Total
	Daytime	Nighttime	Daytime	Nighttime		
Large Jets	104.2	31.3	111.0	24.5	271.0	69.4%
Regional / Air Taxi Jets	11.0	1.4	11.7	0.8	24.9	6.3%
General Aviation Jets	34.3	2.4	33.4	3.3	73.4	18.8%
General Aviation / Commuter Props	9.8	0.9	10.0	0.7	21.4	5.5%
Total	**159.3**	**36.0**	**166.3**	**29.1**	**390.7**	**100%**

Notes: Total may not equal sum total due to rounding.
Daytime = 7:00am – 9:59pm, Nighttime = 10:00pm – 6:59am.
Source: Federal Aviation Administration (FAA) Draft Terminal Area Forecast, July 2023; Landrum & Brown analysis, 2024.

Table C-10 Future (2029) Average-Annual Day Operations by Aircraft Type

Aircraft Type	AEDT ANP Model ID	Arrivals		Departures		Total
		Day	Night	Day	Night	
Large Passenger Jets						
Airbus A220-300	737700	1.1	0.1	1.1	0.1	2.4
Airbus A319-100 Series	A319-131	3.2	1.2	3.4	1.0	8.8
Airbus A320-200 Series	A320-211	5.4	2.8	7.2	1.0	16.4
Airbus A320-NEO	A320-270N	2.6	0.9	2.4	1.1	7.0
Airbus A321-200 Series	A321-232	1.4	0.7	1.5	0.6	4.2
Airbus A321-NEO	A321-232	1.7	1.5	2.5	0.7	6.4
Boeing 717-200 Series	717200	1.1	0.3	1.1	0.3	2.8
Boeing 737-7	7378MAX	8.4	4.1	9.2	3.3	25.0
Boeing 737-700 Series	737700	9.8	2.3	9.8	2.3	24.2
Boeing 737-8	7378MAX	9.7	4.0	11.1	2.6	27.4
Boeing 737-800 Series	737800	8.8	3.6	10.2	2.2	24.8
Boeing 737-9	7378MAX	1.1	0.4	1.2	0.3	3.0
Boeing 737-900-ER	737800	4.7	1.7	4.7	1.7	12.8
Bombardier CRJ-700-ER	CRJ9-ER	1.0	0.1	1.1	0.0	2.2
Bombardier CRJ-900	CRJ9-ER	5.3	0.7	5.0	1.0	12.0
Bombardier CRJ-900-ER	CRJ9-ER	0.4	0.0	0.4	0.0	0.8
Embraer ERJ170	EMB170	3.1	0.6	3.2	0.5	7.4
Embraer ERJ170-LR	EMB170	23.0	4.7	23.8	3.9	55.4
Embraer ERJ175	EMB175	10.4	1.5	10.1	1.8	23.8
Embraer ERJ175-LR	EMB175	1.5	0.1	1.5	0.1	3.2
Embraer ERJ190	EMB190	0.5	0.0	0.5	0.0	1.0
Subtotal		104.2	31.3	111.0	24.5	271.0
Regional / Air Taxi Jets						
Bombardier CRJ-200	CL600	1.6	0.1	1.5	0.2	3.4
Bombardier CRJ-200-LR	CL600	5.8	0.8	6.5	0.2	13.3
Embraer ERJ135	EMB145	0.1	0.0	0.1	0.0	0.2
Embraer ERJ145	EMB145	0.9	0.0	0.9	0.0	1.8
Embraer ERJ145-LR	EMB14L	0.1	0.0	0.1	0.0	0.2
Embraer ERJ145-XR	EMB145	2.5	0.5	2.6	0.4	6.0
Subtotal		11.0	1.4	11.7	0.8	24.9

Table C-10 Future (2029) Average-Annual Day Operations by Aircraft Type *(continued)*

Aircraft Type	AEDT ANP Model ID	Arrivals		Departures		Total
		Day	Night	Day	Night	
General Aviation Jet						
Bombardier Challenger 300	CL600	4.9	0.2	4.9	0.2	10.2
Bombardier Challenger 350	CL600	1.8	0.1	1.8	0.1	3.8
Bombardier Challenger 600	CL600	1.7	0.1	1.6	0.2	3.6
Bombardier Global 5000	BD-700-1A11	0.2	0.0	0.2	0.0	0.4
Bombardier Global Express	BD-700-1A10	0.3	0.1	0.3	0.1	0.8
Bombardier Learjet 31	LEAR35	0.1	0.1	0.1	0.1	0.4
Bombardier Learjet 35	LEAR35	0.1	0.0	0.1	0.0	0.2
Bombardier Learjet 45	LEAR35	0.3	0.1	0.3	0.1	0.8
Bombardier Learjet 60	LEAR35	0.3	0.0	0.3	0.0	0.6
Cessna 501 Citation ISP	CNA500	0.0	0.0	0.0	0.0	0.0
Cessna 550 Citation II	CNA55B	1.0	0.0	1.0	0.0	2.0
Cessna 560 Citation V	CNA560U	1.0	0.0	1.0	0.0	2.0
Cessna 560 Citation XLS	CNA560XL	2.7	0.0	2.6	0.1	5.4
Cessna 650 Citation III	CIT3	0.2	0.0	0.2	0.0	0.4
Cessna 680 Citation Sovereign	CNA680	1.5	0.1	1.5	0.1	3.2
Cessna 680-A Citation Latitude	CNA680	3.7	0.5	3.5	0.7	8.4
Cessna 700 Citation Longitude	CNA680	1.1	0.1	1.1	0.1	2.4
Cessna 750 Citation X	CNA750	0.2	0.0	0.2	0.0	0.4
CESSNA CITATION 510	CNA510	0.1	0.0	0.1	0.0	0.2
Cessna CitationJet CJ2 (Cessna 525A)	CNA525C	1.5	0.1	1.4	0.2	3.2
Cessna CitationJet CJ3 (Cessna 525B)	CNA525C	0.6	0.1	0.6	0.1	1.4
Cessna CitationJet CJ4 (Cessna 525C)	CNA525C	0.5	0.0	0.5	0.0	1.0
Dassault Falcon 200	FAL20	0.8	0.0	0.7	0.1	1.6
Dassault Falcon 50	FAL900EX	1.2	0.2	1.2	0.2	2.8
Dassault Falcon 900	FAL900EX	0.4	0.0	0.4	0.0	0.8
Eclipse 500 / PW610F	ECLIPSE500	0.1	0.0	0.1	0.0	0.2
Embraer Legacy 500 (EMB-550)	CNA55B	0.1	0.0	0.1	0.0	0.2
Embraer Legacy 600	EMB145	0.4	0.1	0.5	0.0	1.0
Embraer Phenom 100 (EMB-500)	CNA510	0.1	0.0	0.1	0.0	0.2
Embraer Phenom 300 (EMB-505)	CNA55B	3.4	0.3	3.3	0.4	7.4
Falcon 7X	GIV	0.2	0.0	0.2	0.0	0.4
Gulfstream Aerospace Gulfstream G500 (G-7)	GV	0.1	0.0	0.1	0.0	0.2

Table C-10 Future (2029) Average-Annual Day Operations by Aircraft Type *(continued)*

Aircraft Type	AEDT ANP Model ID	Arrivals		Departures		Total
		Day	Night	Day	Night	
General Aviation Jet, (continued)						
Gulfstream G150	IA1125	0.1	0.0	0.1	0.0	0.2
Gulfstream G280	CL601	0.3	0.0	0.3	0.0	0.6
Gulfstream G600	GV	0.0	0.0	0.0	0.0	0.0
Gulfstream G650	G650ER	0.1	0.0	0.1	0.0	0.2
Gulfstream IV-SP	GIV	0.9	0.0	0.8	0.1	1.8
Gulfstream V-SP	GV	0.2	0.0	0.2	0.0	0.4
Honda HA-420 Hondajet	CNA510	0.1	0.0	0.1	0.0	0.2
Raytheon Hawker 4000 Horizon	CNA750	1.0	0.1	1.0	0.1	2.2
Raytheon Hawker 800	LEAR35	0.8	0.2	0.9	0.1	2.0
Raytheon Premier I	CNA55B	0.1	0.0	0.1	0.0	0.2
Subtotal		34.2	2.5	33.6	3.1	73.4
General Aviation Props						
Cessna 172 Skyhawk	CNA172	0.5	0.0	0.5	0.0	1.0
Cessna 182	CNA182	0.3	0.0	0.3	0.0	0.6
Cessna 206	CNA20T	0.1	0.0	0.1	0.0	0.2
Cessna 208 Caravan	CNA208	0.4	0.0	0.4	0.0	0.8
Cessna 310	BEC58P	0.2	0.0	0.2	0.0	0.4
Cessna 441 Conquest II	CNA441	0.2	0.0	0.2	0.0	0.4
Cirrus SR20	COMSEP	1.0	0.1	1.0	0.1	2.2
EADS Socata TBM-700	CNA208	0.4	0.0	0.3	0.1	0.8
Piaggio P.180 Avanti	DHC6	0.2	0.1	0.2	0.1	0.6
Pilatus PC-12	CNA208	2.5	0.1	2.4	0.2	5.2
Piper PA-28 Cherokee Series	GASEPF	0.5	0.1	0.5	0.1	1.2
Piper PA-30 Twin Comanche	PA30	0.1	0.0	0.1	0.0	0.2
Piper PA-31 Navajo	BEC58P	0.1	0.0	0.1	0.0	0.2
Piper PA46-TP Meridian	CNA208	0.5	0.0	0.5	0.0	1.0
Raytheon Beech Baron 58	BEC58P	0.1	0.0	0.1	0.0	0.2
Raytheon Beech Bonanza 36	GASEPV	1.3	0.3	1.6	0.0	3.2
Raytheon King Air 100	DHC6	0.1	0.0	0.1	0.0	0.2
Raytheon King Air 90	DHC6	0.1	0.0	0.1	0.0	0.2
Raytheon Super King Air 200	DHC6	0.3	0.0	0.3	0.0	0.6
Raytheon Super King Air 300	DHC6	1.0	0.1	1.0	0.1	2.2
Subtotal		9.9	0.8	10.0	0.7	21.4
Grand Total		159.3	36.0	166.3	29.1	390.7

Notes: Total may not equal sum total due to rounding.
Daytime = 7:00am – 9:59pm, Nighttime = 10:00pm – 6:59am.

Source: Federal Aviation Administration (FAA) Operations Network (OpsNet) data, CRAA Landing Fee Reports, CMH ANOMS data, Landrum & Brown analysis, 2024.

Runway End Utilization: Average-annual day runway end utilization in 2029 is expected to remain similar to 2024 conditions. Therefore, runway end utilization percentages modeled for the Future (2029) conditions are the same as the Existing (2024) conditions as shown in Table C-3.

Flight Tracks: No changes to flight track locations or utilization percentages are expected to occur by 2029. Therefore, flight track locations modeled for the Existing (2024) Noise Exposure Contour, and shown in Exhibits C-10 through C-16, remain the same for the Future (2029) Noise Exposure Contour modeling. Similarly, flight track percentages modeled for the Existing (2024) Noise Exposure Contour, shown in Table C-4 and Table C-5, remain the same for the Future (2029) Noise Exposure Contour modeling.

Aircraft Weight and Departure Stage Length: No notable change is expected to the destinations of aircraft operations from CMH; however, minor variations to average departure stage length would be expected to occur due to changes in fleet mix. The stage lengths modeled for the Existing (2029) baseline noise exposure contour are shown in **Table C-11**.

Aircraft Weight and Departure Stage Length: The average aircraft departure weights modeled for the Future (2029) Baseline Noise Exposure Contour is based on forecasted departure trip lengths from the forecast of aviation activity prepared for this Part 150 Study Update. There are expected to be no significant changes in the destinations served by airlines from CMH, however changes in the number of operations and fleet mix results in small variations in the departure trip length distributions for the 2029 conditions as shown in **Table C-11**.

Table C-11 Future (2029) Departure Stage Lengths

Stage Length Category	Large Jet	Regional / Air Taxi Jet	General Aviation Jet	General Aviation / Commuter Prop
1	56.4%	95.2%	98.2%	100.0%
2	28.1%	4.8%	1.1%	0.0%
3	9.0%	0.0%	0.2%	0.0%
4	6.5%	0.0%	0.2%	0.0%
5	0.0%	0.0%	0.3%	0.0%
6	0.0%	0.0%	0.1%	0.0%
7	0.0%	0.0%	0.0%	0.0%
8	0.0%	0.0%	0.0%	0.0%
9	0.0%	0.0%	0.0%	0.0%
10	0.0%	0.0%	0.0%	0.0%
11	0.0%	0.0%	0.0%	0.0%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Cirium Aviation Analytics data, Landrum & Brown analysis, 2024.

Ground Run-up Noise: Engine run-ups would be expected to increase in relation to the increase in operations forecast for 2029. Engine run-up activity was projected for the 2029 conditions based upon the forecast increase in operations at CMH. Estimates of run-up times, durations and locations remained the same as described for the 2024 conditions. The number, types, durations and times of day of engine run-ups that were modeled for the Future (2029) Noise Exposure Contour are shown in **Table C-12**.

Table C-12 Future (2029) Run-Up Operations

Run-Up Location	Aircraft ANP ID	Annual Runups			Average Duration (minutes)	Thrust Setting
		Daytime	Nighttime	Total		
Southeast Ramp Area	CRJ9-ER	66	22	88	5:11	80%
Southeast Ramp Area	EMB145	213	71	284	5:00	80%
NetJets Ramp Area	CNA560U	47	16	63	6:48	80%
NetJets Ramp Area	CNA680	25	8	33	4:15	80%
Terminal Apron	EMB145	36	12	48	9:27	80%
Terminal Apron	EMB175	62	21	83	4:10	80%
Total		**449**	**150**	**599**	**N/A**	**N/A**

Source: CRAA Run-Up Logs, Landrum & Brown, 2024.

C.5.3 Comparability of Conditions

The number of annual operations and fleet mix modeled for Existing (2024) Baseline Noise Exposure Contours are based on actual data from September 2022 through August 2023. The operating levels for the Future (2029) Noise Exposure Contour is based upon the FAA TAF. More information about the forecast is included in Appendix F.

As previously stated, total operations used in the modeling of the Existing (2024) Baseline condition are based on actual operating levels for the period of September 2022 through August 2023. During that period, 118,397 annual operations occurred at CMH. The FAA's Operations Network (OPSNET) database reported a total of 121,864 operations for the most recent 12 months for which data was available at the time of this writing (November 2023 to October 2024). The difference between the annual operations used to model the Existing (2024) Baseline condition and the OPSNET data is 3,467 operations (2.9 percent difference). As such, the operating levels used to prepare the Existing (2024) Baseline are similar to operating levels for the most recent 12 months. Furthermore, no significant changes in runway use, fleet mix, or flight tracks have occurred. Therefore, the Existing (2024) Baseline condition is representative of the operating conditions for the last 12 months (November 2023 to October 2024).

This page intentionally left blank

Appendix D - Land Use Assessment Methodology

Identifying and evaluating land uses within the airport environs is an important step in the Part 150 process. This evaluation is necessary to identify residential and other noise-sensitive land uses that may be affected by airport noise and operations. The land use assessment includes examining land use classifications, zoning codes, and development trends within the airport environs; and applying the Federal Aviation Administration (FAA) Part 150 guidelines for land use compatibility and previous land use mitigation efforts conducted by the Columbus Regional Airport Authority (CRAA) at John Glenn Columbus International Airport (CMH or Airport). A Geographic Information System (GIS) land use database was developed to facilitate the identification of land uses that are incompatible with airport operations.

D.1 Airport Environs and General Study Area

The airport environs, as discussed in **Chapter 2, *Affected Environment***, refers to the regional area that may experience broader effects from the noise due to aircraft operations. The airport environs for CMH is shown in **Exhibit 2-1**, and depicts the area of northeast Columbus and other jurisdictions in eastern Franklin County and western Licking County. The map includes jurisdictional boundaries, local roads and major highways, the Airport property boundary, and other geographical features. 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 at CMH.

D.2 Land Use Mapping

Land use data was collected and incorporated into a GIS database that includes jurisdictional boundaries, roads, bodies of water, and other physical features. The database was used to identify existing land use conditions within the airport environs and to identify areas impacted by noise per FAA guidelines. This section describes the methodology for collecting and analyzing land use data.

D.2.1 Land Use Classifications

Existing land use data was collected from the local governments within the GSA, including the City of Columbus and Franklin and Licking Counties. Land uses shown on the exhibits were categorized in terms of the general land use classifications presented in 14 CFR Part 150, which include residential (single, multi-family, and mobile homes), commercial, industrial (e.g., manufacturing and production), public uses, recreational, agricultural, and vacant/open space. These land uses were identified based on Franklin County's GIS database and supplemented by aerial photography and field verification. **Table D-1** shows the generalized land use categories and the specific land uses from the Franklin County GIS database that were grouped into these general land use categories. The existing land use patterns within the Airport Environs is shown in Exhibit 2-2, Generalized Existing Land Use in Chapter Two, Affected Environment. Property that was identified as under development or proposed for development is depicted as "transitional/mixed use" on the Future (2029) NEM.

Table D-1 Generalized Land Use Classifications

Generalized Land Use	Specific Land Use Types
Agricultural / Open Space	Vacant / Unplatted
	Property Used in Agricultural Operation[1]
One Family Residential	Single-Family Residential
Two-Family Residential	Two-Family Residential
Multi-Family Residential	Condominium
	Three-Family Dwelling
	Apartments (4 to 19 Family)
	Apartments (20 to 39 Family)
	Apartments (40+ Family)
	Commercial Rooming House
	Condo (4 to 19 Units)
	Condo (20 to 39 Units)
	Condo (40+ Units)
Manufactured Home Park	Mobile Home Park
Commercial	Sales
	Services
	Retail / Grocery
	Commercial Recreation
	Car Wash
	Commercial Storage Units
	Commercial Garage
	Restaurant / Food Service
	Bank
	Office
	Hotel / Motel
	Parking Structure
	Warehouse / Shop with Office
	Surface Parking Lot
Industrial	Distribution / Warehouse / Terminal
	Food Processing
	Foundry / Manufacturing
	Industrial Wholesale / Terminal
	Light Manufacturing
	Mining / Quarry
Institutional	Church / Place of Worship
	Day Care / Preschool
	Government Building / Facility
	Hospital
	Libraries
	Nursing Home / Care Facility

Table D-1 Generalized Land Use Classifications *(continued)*

Generalized Land Use	Specific Land Use Types
Park / Recreation	Golf Course
	Park
Exempt	Utilities
	Government non-Institutional

Notes:
1 Agricultural uses are classified as Manufacturing and Production under 14 C.F.R. Part 150 Guidelines but are identified separately for this Study for ease of understanding the land uses near the Airport.

D.2.2 GIS Data Compilation

Base mapping information; including roads, county and municipal boundaries, and land use; were compiled using ArcMap, version 10.7. ArcMap is an analytical software program that allows manipulation and analysis of spatial data from a variety of sources. The base map information is used for comparison to aircraft noise and operational data analyzed for this study. Flight track data obtained for this Study as described in **Appendix C, *Noise Methodology***, was overlaid onto the land use base map. Noise contours generated by the Aviation Environmental Design Tool (AEDT) were superimposed over the land use base map to produce the Noise Exposure Maps (NEMs) for this Study.

Land parcel and facility data was obtained from Franklin County and the City of Columbus in August 2019 and areas within the previous 65 DNL noise exposure contour for CMH were field verified in November 2019. The field verified parcel data was used to identify land uses that would be considered noise-sensitive land per FAA guidelines. The 2010 U.S. Census data, at the tract and block level, was combined with the parcel data to calculate total population based on average household size. An estimated ratio of persons per household was determined based on U.S. Census data and that ratio was applied to each parcel to estimate the population within each housing unit. The housing and population incompatibilities within each of the noise contours were determined by overlaying the noise contour and the parcel data using GIS software. The number of residential parcels/structures and population within each DNL noise contour level were then determined by an automated count using the GIS software's built-in capabilities. Land use data was further supplemented with review of aerial imagery and updated GIS data was conducted in May 2021.

D.2.3 Noise-Sensitive Public Facilities

Land uses that could be considered incompatible with airport operations include more than just residential uses. FAA guidelines define certain public facilities as noise-sensitive: places of worship, schools (and daycare facilities at which licensed education occurs), nursing homes, libraries, and hospitals. Detailed information on noise-sensitive facilities was collected within the GSA. A variety of sources were used to obtain GIS data showing the locations of noise-sensitive public facilities within the airport environs, including GIS data from Franklin County, the City of Columbus, aerial imagery and past studies at CMH. This data was supplemented using aerial imagery and field verification in November 2019.

Within this area there are 162 schools,[37] 230 places of worship, seven libraries, three hospitals, and fourteen nursing homes as shown on **Exhibit D-1, *Existing Noise-Sensitive Public Facilities***, which identifies each noise-sensitive facility by a unique alpha-numeric "Map ID" and Table D-2 which lists the facilities by name and corresponding Map ID.

[37] Includes daycare facilities were licensed education occurs as listed by the City of Columbus or Franklin County.

D.2.4 Development Trends

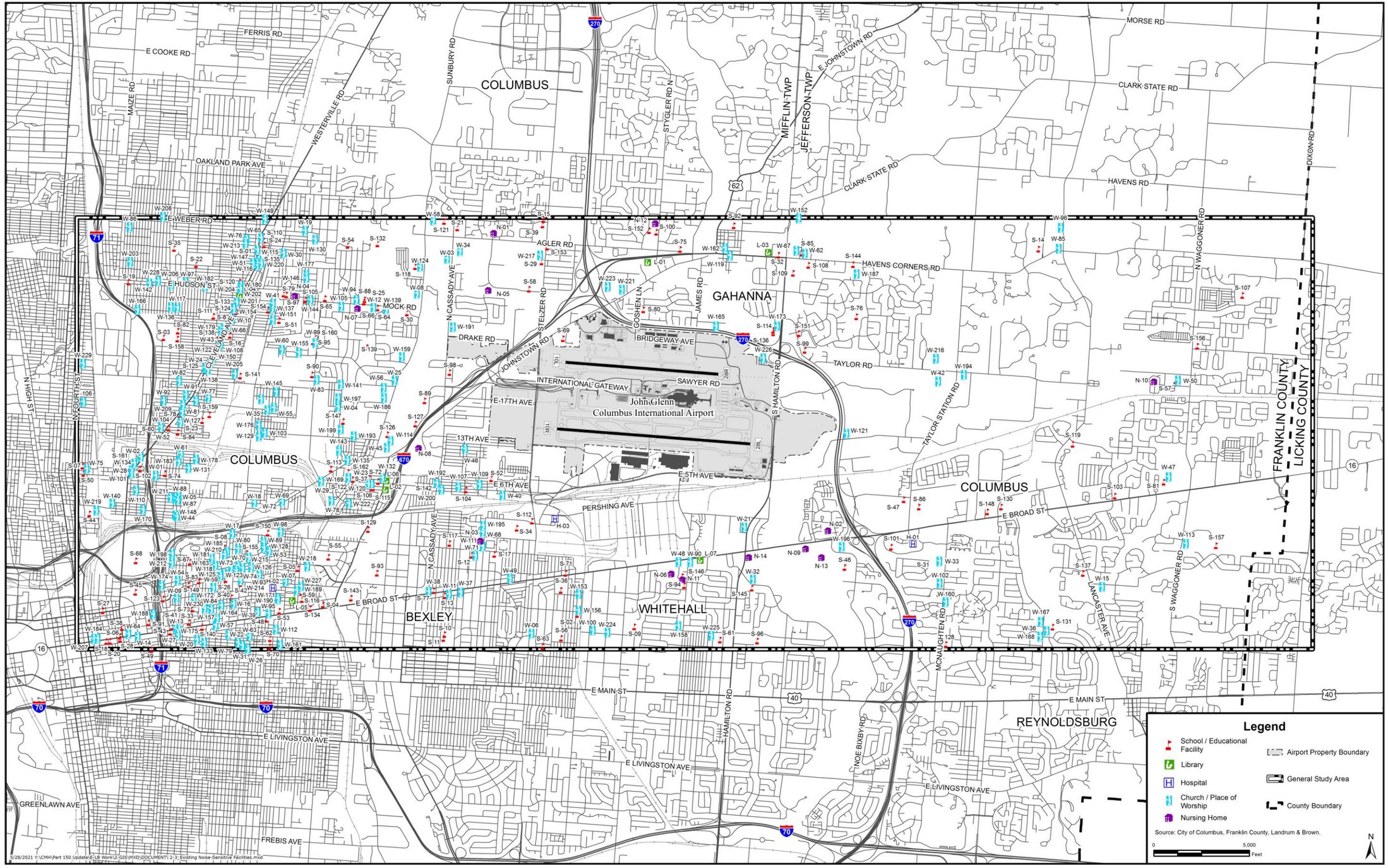
Development is also expected to occur to meet the demands for residential and commercial uses created by population growth. To the northwest, west, and southwest of CMH, infill development and/or redevelopment could occur along Stelzer Road and Cassady Avenue. To the south and east of the Airport, new residential development could occur through infill within existing neighborhoods and new subdivision development. The following new development is underway or expected to occur by 2029 within the GSA.

- Norton Crossing development is under construction in Whitehall, at the corner of South Hamilton Road and East Broad Street which will be a mixed use development including office, retail, and residential.[38]
- Homeport Development is under construction in Whitehall at the corner of South Hamilton Road and Etna Road which will include a 102-unit apartment complex and a 32-unit senior living complex.[39,]
- East of the Airport, Tech Center Drive was extended across I-270 and Hamilton Road, which has created access to land for more new development. The parcel north of Tech Center Drive and east of Hamilton Road is proposed for mixed use, including 240 apartments, office space, retail, residential, and recreations uses.[40, 41] The development application for the site known as Crescent at Central Park was submitted to the City of Gahanna and a zoning change and variance for the development was approved in February 2021.
- To the west of the Airport, several properties along Cassady Avenue are proposed for new development, including Woodfield Park, which would include a 240-unit apartment complex, and Cassady Avenue Development, which would include an ambulatory care facility, hotel and commercial space near the intersection of Cassady Avenue and Ackley Place.[42, 43]
- To the west of CMH on the northwest corner of Sunbury Road and Bethesda Avenue, there is a proposal to develop a multi-family apartment complex on approximately 10.8 acres.
- To the northwest of CMH, potential redevelopment includes Victoria Manor, a proposed new 480-unit housing development on Stelzer Road north of Agler Road.[44]
- To the southwest of CMH, proposed new development includes the Creekside Place Apartments, which would be located on Nelson Road north of Maryland Avenue.[45]
- To the east of CMH at 1099 Reynoldsburg-New Albany Road in Jefferson Township, there is a proposal for the development of a 30 single-family lot subdivision on 30.48+- acres.[46]

Properties that are under development or proposed for development are displayed as “transitional / mixed-use” on the Future (2029) NEM.

[38] Corvo, K. Residents will see big strides soon at Whitehall’s Norton Crossing, This Week News. March 26, 2019. Accessed online at: https://www.thisweeknews.com/news/20190326/residents-will-see-big-strides-soon-at-whitehalls-norton-crossing
[39] Navera, T. Two new housing developments approved for Whitehall, Columbus Business Journal. February 5, 2019. Accessed online at: https://www.bizjournals.com/columbus/news/2019/02/05/two-new-housing-developments-approved-for.html
[40] City of Gahanna, Planning Commission Meeting Minutes, September 23, 2020, Accessed online at: https://gahanna.legistar.com/Calendar.aspx
[41] ThisWeek Community News, Gahanna council OKs zoning change for Crescent at Central Park apartments to move forward, February 16, 2021.
[42] American City Business Journals, Columbus Business First, Developer proposes 41-acre mixed-use project near John Glenn Columbus International Airport, July 23, 2019, Accessed online at: https://www.bizjournals.com/columbus/news/2019/07/23/developer-proposes-41-acre-mixed-use-project-near.html.
[43] American City Business Journals, Columbus Business First, Metro Development plans 720 new apartments near Columbus airport, Easton, October 2, 2020, Accessed online at: https://www.bizjournals.com/columbus/news/2020/10/02/720-new-apartments-pitched-near-easton.html.
[44] Ibid
[45] American City Business Journals, Columbus Business First, May 24, 2019, Accessed online at: https://www.bizjournals.com/columbus/news/2019/05/24/slideshow-7-affordable-housing-projects-land-tax.html
[46] http://www.harrisonpond.org/calendar2.php?view=event&id=453

Exhibit D-1 Existing Noise-Sensitive Public Facilities



This page intentionally left blank

Table D-2 Noise-Sensitive Public Facilities

MAP ID	NAME
	Schools
S-01	A Better Choice Childcare
S-02	A+ Arts Academy High School
S-03	Academic Acceleration Academy
S-04	Academy for Urban Scholars
S-05	Academy Kids Learning Center
S-06	ATM Education First
S-07	Battelle Learning Center
S-08	Beatty Park / Trevitt Elementary School
S-09	Beechwood Elementary School
S-10	Bexley High School
S-11	Bexley Middle School
S-12	Bexley Play & Learn Early Learning Center
S-13	Bexley United Methodist Preschool
S-14	Blacklick Elementary
S-15	Bradford School
S-16	Brightside Academy
S-17	Broadleigh Elementary School
S-18	C James Grothaus Child Care Center
S-19	Cambridge Daycare Center
S-20	Capital University Law School
S-21	Cassady Alternative Elementary School
S-22	CDC Linden Head Start
S-23	CDCFC Rosewind Head Start
S-24	Central Ohio Childcare
S-25	Cesar Chavez College Preparatory School
S-26	Champion Middle School
S-27	Child Development Council of Franklin County
S-28	ChildCare Wonderland
S-29	Children Achievers Faith Academy
S-30	Children's Sweet Paradise Learning Center
S-31	Church of The Redeemer United Methodist Preschool
S-32	Clark Hall – Gahanna Lincoln School District
S-33	Clearbrook Middle School
S-34	Columbus Africentric Early College
S-35	Columbus Alternative High School
S-36	Columbus City Preparatory School for Boys
S-37	Columbus City Schools Early Ed
S-38	Columbus College of Art and Design
S-39	Columbus Culinary Institute
S-40	Columbus Early Learning Centers
S-41	Columbus Early Learning Centers
S-42	Columbus Early Learning Centers
S-43	Columbus Learning Cooperative
S-44	Columbus Performance Academy

Table D-2 Noise-Sensitive Public Facilities *(continued)*

MAP ID	NAME
S-45	Columbus State Community College
S-46	Columbus Torah Academy
S-47	Creative Child Care
S-48	Crittenton Community School
S-49	Davis Center Youth Program
S-50	Daydream Daycare North
S-51	Duxberry Park Alternative Elementary School
S-52	East Columbus Elementary School
S-53	East High School
S-54	East Linden Elementary School
S-55	Eastgate Elementary School
S-56	Eastmoor Academy
S-57	Eastpointe Christian Preschool
S-58	Educational Service Center of Central Ohio
S-59	Eldon Ward YMCA Daycare
S-60	Elite Academy & Childcare Center
S-61	Etna Road Elementary YMCA Y Club
S-62	Fair Elementary School
S-63	Fairmoor Elementary School
S-64	FCI Academy Kindergarten Village
S-65	FCI Academy-North Campus
S-66	FCI Too Child Care Center
S-67	Felton School
S-68	Fort Hayes Arts & Academic HS and Career Center
S-69	Franklin County Developmental Disabilities
S-70	Franklin Middle School
S-71	Fresh Start Learning Academy
S-72	Future Leaders Learning Academy
S-73	Future Scholars Early Learning Center
S-74	G Tyree Learning Center
S-75	Gahanna Children's College
S-76	Gahanna Middle School South
S-77	Gan Ephraim
S-78	Giggles & Blessings Learning Center
S-79	Global Childcare Center
S-80	Goshen Lane Elementary
S-81	Grace Christian School
S-82	Hamilton STEM Academy
S-83	Hands on Learning Academy
S-84	Harambee Christian School
S-85	Havens Corners Kindercare
S-86	Heritage College
S-87	Hoggy's Play Pen North
S-88	iEducate Academy
S-89	Insight School of Ohio

Table D-2 Noise-Sensitive Public Facilities *(continued)*

MAP ID	NAME
S-90	IQRA Learning Center
S-91	Jefferson Center for Learning
S-92	Jefferson Elementary
S-93	Jeffrey Mansion Preschool
S-94	Jelly Bean Junction
S-95	Joyful Beginnings Children's Learning Academy
S-96	Kae Avenue Y-Club
S-97	Kids Castle Learning Center
S-98	Kids Zone Learning Center
S-99	KinderCare Learning Center
S-100	KinderCare Learning Center
S-101	KinderCare Learning Center
S-102	Kings and Queens Learning Center
S-103	La Petite Academy
S-104	Leaders Learning Center
S-105	Lending Hand Learning Center
S-106	Let the Children Come
S-107	LHW Elementary School
S-108	Lincoln Elementary
S-109	Lincoln High School
S-110	Linden Elementary School
S-111	Linden-McKinley STEM
S-112	Little Buckeye Learning Center
S-113	Little Gems Learning Place
S-114	Little Lambs Children's Center
S-115	Little Treasures Learning Academy
S-116	Mansion Day Elementary
S-117	Maryland School
S-118	Mee Maw's House of Learning
S-119	Michelle's Academy
S-120	Midnimo Cross Cultural Community School
S-121	Mifflin Middle School
S-122	Mother's Helper Child Care
S-123	Mother's Helper Child Care II
S-124	New Era Academy
S-125	New Journey Learning Center
S-126	Ohio Dominican University
S-127	Ohio Dominican University
S-128	Olde Orchard Elementary School
S-129	Our Play Station & Learning Center
S-130	Primrose School
S-131	Rosehill Elementary School
S-132	Rosemont Center School
S-133	Safe Haven Day Care & Learning Center
S-134	Salon Schools Group

Table D-2 Noise-Sensitive Public Facilities *(continued)*

MAP ID	NAME
S-135	School of Biblical Theology
S-136	Shepherd Christian Elementary School
S-137	Shining Stars Child Care
S-138	Sonshine Christian Academy
S-139	South Mifflin STEM Academy
S-140	St John Paul II Early Childhood Education Center
S-141	St Stephen's Christ Child Early Learning Center
S-142	St Thomas the Apostle School
S-143	St. Charles Preparatory School West Campus
S-144	St. Matthew School
S-145	Start 2 Finish Learning Academy
S-146	Start 2 Finish Learning Academy II
S-147	The Charles School
S-148	The Goddard School
S-149	The Ohio State University Branch
S-150	The Ohio State University Medical Branch
S-151	The Sunshine House
S-152	Treehouse Learning Center
S-153	Twinkle Star Child Care Center
S-154	United Childcare Center
S-155	Valor Preparatory School of Ohio
S-156	Waggoner Academy Learning Center
S-157	Waggoner Road Middle School
S-158	Welcome Center High School
S-159	Windsor Alternative School
S-160	Woodland Child Care Center
S-161	Youth Build Columbus Community School
S-162	YWCA Family Center Safe & Sound Child Care
	Libraries
L-01	Central Library Consortium
L-02	Columbus Metropolitan Library
L-03	Columbus Metropolitan Library - Gahanna
L-04	Columbus Metropolitan Library - Linden
L-05	Columbus Metropolitan Library - Martin Luther King
L-06	Columbus Metropolitan Library - Shepard
L-07	Columbus Metropolitan Library - Whitehall
	Churches / Places of Worship
W-01	Abundant Faith Church of God
W-02	Acts of Faith
W-03	Advent Church UCC
W-04	Aenon Missionary Baptist
W-05	Agape Outreach Ministries
W-06	All Nations Christian Church
W-07	Astbury United Methodist Church
W-08	Baha'i Faith

Table D-2 Noise-Sensitive Public Facilities *(continued)*

MAP ID	NAME
W-09	Bethany Presbyterian Church
W-10	Bethel AME Church
W-11	Bexley United Methodist
W-12	Born to Win Christian Center
W-13	Broad Street Presbyterian Church
W-14	Broad Street United Methodist Church
W-15	Brookside Baptist Church
W-16	Calhoun Temple Church
W-17	Calvary Tremont Baptist Church
W-18	Canaan Temple Church
W-19	Centenary United Methodist Church
W-20	Central Seventh Day Adventist Church
W-21	CharismaLife Ministries
W-22	Christ Bible Church
W-23	Christ Community Church
W-24	Christian Empowerment Center Ministries
W-25	Christian Outreach Ministries
W-26	Church of the Divine Kingdom Builders
W-27	Church - Corner of Garfield Ave and Capital St
W-28	Church In Jesus Christ
W-29	Church New Hope Church of God
W-30	Church of Christ
W-31	Church of Living God
W-32	Church of St. Edward
W-33	Church of The Redeemer
W-34	Columbus Christian Center
W-35	Columbus Family Worship Center
W-36	Community of Christ
W-37	Congregation Aguda Achim
W-38	Congregation Ahavas Sholom
W-39	Congregation Tifereth Israel
W-40	Corinthian Missionary Baptist Church
W-41	Cornerstone Pentecostal Church
W-42	Country Fellowship Church
W-43	Crackhouse Ministries
W-44	Deeper Life Bible Church
W-45	Dominican Sisters of Peace
W-46	East Mt. Olivet Baptist Church
W-47	East Side Grace Brethren Church
W-48	East Whitehall Baptist Church
W-49	Eastminster Presbyterian Church
W-50	Eastpointe Christian Church
W-51	Ebenezer Haician
W-52	Eliezer Church of Christ
W-53	Emmanuel Community Baptist Church

Table D-2 Noise-Sensitive Public Facilities *(continued)*

MAP ID	NAME
W-54	Emmanuel Tabernacle Baptist Church
W-55	Ephphatha Outreach Ministries
W-56	Eternal Life of Christ
W-57	Ethiopian Orthodox Tewahedo Church
W-58	Faith Ministries Church
W-59	Faith Missions United Holy Church
W-60	Faith Tabernacle Church of God in Christ
W-61	Faith Tabernacle Holiness Church
W-62	First Baptist Church of Gahanna
W-63	First Church of God
W-64	First Congregational Church
W-65	First Spiritualist Church
W-66	Fresh Oil Christian Center
W-67	Gahanna Community Church
W-68	Glory Evangelistic Ministries
W-70	God & Saints Christ Church
W-69	God's House of Prayer
W-71	Good Shepherd Lutheran
W-72	Goodwill Baptist Church
W-73	Gospel Tabernacle Church
W-74	Gospel Tabernacle Food Pantry
W-75	Grace Baptist Church
W-76	Grace New Covenant Apostolic
W-77	Greater 12th Ave Baptist Church
W-78	Greater Christ Temple
W-79	Greater Faith Temple Apostolic
W-80	Greater Glory Ministries
W-81	Greater Liberty Temple
W-82	Greater Linden Community Church
W-83	Greater St. Paul Church
W-84	Greater Vision Missionary Baptist
W-85	Havens Corners Church
W-86	Higher Dimensions
W-87	Higher Ground Always Abounding Assemblies
W-88	Higher Ground Family Life Center
W-89	Holy Miracle Church of God
W-90	Holy Spirit Catholic Church
W-91	Holy Temple Church of God
W-92	HOP Church
W-93	House of God
W-94	IbnuTaymiyah Masjid and Islamic Center
W-95	Islamic Center
W-96	Jehovah’s Witnesses
W-97	Jehovah's Witnesses
W-98	Jerusalem Tabernacle Baptist

Table D-2 Noise-Sensitive Public Facilities *(continued)*

MAP ID	NAME
W-99	Jordan Bible Church
W-100	Kingdom Christian Center
W-101	Kingdom Life Church
W-102	Laurel Canyon Church of Christ
W-103	Lee Avenue United Methodist Church
W-104	Linden Life Fellowship
W-105	Living Faith Apostolic Church
W-106	Living Hope Fellowship
W-107	Living Hope Omega Ministries
W-108	Living Waters Christian Fellowship
W-109	Living Word Ministries
W-110	Lord Jesus Christ's Church
W-111	Lord of Life Fellowship
W-112	Love Zion Baptist Church
W-113	Macedonia Orthodox Church
W-114	Martin De Porres Center
W-115	Masjid As-Sahaba Mosque
W-116	Masjid Ul Bayyinah
W-117	Maynard Ave Baptist Church
W-118	Meredith Temple Church of God
W-119	Mifflin Presbyterian Church
W-120	Miracle Cathedral
W-121	Mount Judia Church
W-122	Mount Zion International
W-123	Mt Calvary Holy Church
W-124	Mt Hermon Baptist Church
W-125	Mt Vernon Ave AME Church
W-126	Mt Vernon Missionary Baptist Church
W-127	Mt Victory Baptist Church
W-128	Mt Zion Church of God in Christ
W-129	Mt Zion Missionary Baptist Church
W-130	Mt. Nebo Baptist Church
W-131	New Covenant House of God
W-132	New Creation Missionary Baptist Church
W-133	New Faith Baptist Church
W-134	New Generation Church
W-135	New Genesis Baptist Church
W-136	New Haven Church
W-137	New Jerusalem MBC
W-138	New Journey Christian Ministries
W-139	New Life Church
W-140	New Life Empowerment Center
W-141	New Life Worship Center
W-142	New Palestine Baptist Church
W-143	New Season Christian Ministries

Table D-2 Noise-Sensitive Public Facilities *(continued)*

MAP ID	NAME
W-144	New Shiloh Full Gospel Missionary Baptist Church
W-145	New Tabernacle Church of Christ
W-146	New Tabernacle Church of Christ II
W-147	New Walk Church of God in Christ
W-148	New Wine Community Church
W-149	North Linden Baptist Church
W-150	Northside Church of God
W-151	Original Glorious Church of God in Christ
W-152	Peace Lutheran Church
W-153	Peace Missionary Baptist Church
W-154	Pentecostal House of Prayer
W-155	Philadelphia Baptist Church of Love and Faith
W-156	Philadelphia Deliverance Church of Christ
W-157	Pilgrim Baptist Church
W-158	Praise Temple Church of God
W-159	Praise Temple Community Church
W-160	Prince of Peace Lutheran Church
W-161	Promise Land Church
W-162	Rays of Light Church
W-163	Refuge Baptist Church
W-164	Rehoboth Temple Church of Christ
W-165	Resurrection Power Church of God
W-166	Revival Covenant Church
W-167	Reynoldsburg Alliance Church
W-168	Reynoldsburg Baptist Church
W-169	Rose International Center
W-170	Rose of Sharion Baptist Church
W-171	Saint Phillip Lutheran Church
W-172	Second Baptist Church
W-173	Shepherd Church of the Nazarene
W-174	Shiloh Baptist Church
W-175	Shiloh Christian Center
W-176	Sigsbee Avenue Church of God
W-177	So Help Me God Church of Christ
W-178	Solid Rock Baptist Church
W-179	Sound Doctrine Baptist Fellowship Church
W-180	St. Augustine & Gabriel Church
W-181	St. Dominic Church
W-182	St. James Baptist Church
W-183	St. John Baptist Church
W-184	St. Joseph Cathedral
W-185	St. Mark AME Church
W-186	St. Mary Orthodox Tewahdo Church
W-187	St. Mathews Apostle Church
W-188	St. Paul AME Church

Table D-2 Noise-Sensitive Public Facilities *(continued)*

MAP ID	NAME
W-189	St. Philip Episcopal Church
W-190	St. Philip Lutheran Church
W-191	St. Stevan-Dechani Serbian Church
W-192	St. Thomas the Apostle
W-193	Tabernacle Baptist Church
W-194	Taylor Station Church
W-195	Tears of Life Fellowship
W-196	Temple Israel
W-197	Temple of Faith
W-198	Temple of Praise
W-199	The Church of Christ of the Apostolic Faith
W-200	The Church of Columbus
W-201	The Church of Columbus
W-202	The Elevation Church
W-203	The Father's Heart International Church
W-204	The Good Shepherd Baptist Church
W-205	The House of God Church
W-206	The House of Prayer
W-207	The Roman Catholic Diocese of Columbus
W-208	The Way of Holiness Church, Inc.
W-209	Travelers' Rest Baptist Church
W-210	Trevitt New Life Ministries
W-211	Triedstone Missionary Baptist Church
W-212	Trinity Baptist Church
W-213	True Love Ministries
W-214	Union Grove Baptist Church
W-215	Union Tabernacle of God
W-216	United Baptist Church
W-217	United Faith International Baptist Church
W-218	United House of Prayer
W-219	Veritas Community Church
W-220	Victory Deliverance Church
W-221	Victory in Pentecost
W-222	Walk of Faith Christian Center
W-223	Walnut Creek Presbyterian Church
W-224	Whitehall Church of Christ
W-225	Whitehall United Methodist Church
W-226	Wonderland Community Church
W-227	Woodland Christian Church
W-228	Word at Work Ministries
W-229	Xenos Christian Fellowship
W-230	Yeshua is Lord Ministries

Table D-2 Noise-Sensitive Public Facilities *(continued)*

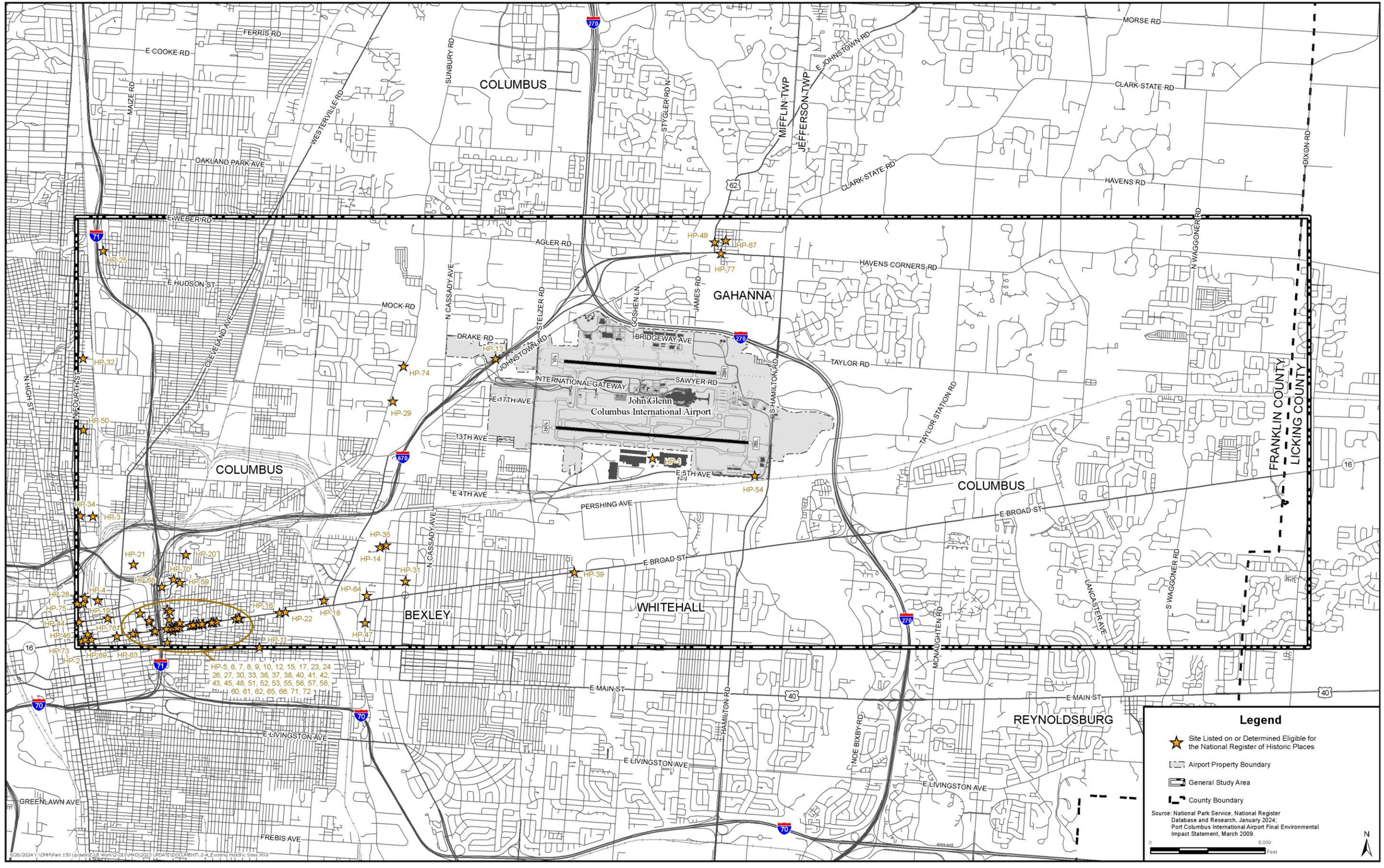
MAP ID	NAME
	Hospitals
H-01	Mount Carmel East Hospital
H-02	Ohio State University Hospital East
H-03	Veterans Affairs - Chalmers P. Wylie Ambulatory Care Center
	Nursing Homes
N-01	Agler Elderly Housing
N-02	Arbors East
N-03	Chandler Arms
N-04	Columbus Elderly Housing, LLC
N-05	Creative Housing
N-06	Eastway Village
N-07	Hegemon Crest Senior Housing
N-08	Kensington Place
N-09	Mother Angeline McCrory
N-10	National Church Residences
N-11	Pinewood Creative Housing
N-12	Stygler Village Senior Housing
N-13	Villas at St. Therese
N-14	Whitehall Assisted Living

Sources: City of Columbus GIS Open Data and Map Portal, Franklin County Auditor, Franklin County GIS Open Data, Landrum & Brown 2020.

D.2.5 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. 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 D-2, Historic Resources and listed in Table D-3, Historic Sites within General Study Area.

Exhibit D-2 Existing Historic Sites



This page intentionally left blank

Table D-3 Historic Sites within General Study Area

MAP ID	NAME
HP-1	Air Force Plant 85
HP-2	Athletic Club of Columbus
HP-3	Berry Brothers Bolt Works
HP-4	Bradford Shoe Company Building
HP-5	Broad Street Apartments
HP-6	Broad Street Christian Church
HP-7	Broad Street United Methodist Church
HP-8	Cambridge Arms
HP-9	Central Assurance Company
HP-10	Columbus Gallery of Fine Arts
HP-11	Columbus Near East Side District
HP-12	Columbus Near East Side Historic District-Parsons Avenue (Boundary Increase)
HP-13	Drake, Elam, House (structures removed in 2023)
HP-14	Duncan, Robert P., House
HP-15	East Broad Street Commercial Building
HP-16	East Broad Street Historic District
HP-17	East Broad Street Presbyterian Church
HP-18	Edna, The
HP-19	Engine House No. 16
HP-20	Felton School
HP-21	Fort Hayes
HP-22	Franklin Park Conservatory
HP-23	Garfield--Broad Apartments
HP-24	Hamilton Park Historic District
HP-25	Hamilton, Gilbert H., House
HP-26	Hanna House
HP-27	Heyne--Zimmerman House
HP-28	Higgins, H. A., Building
HP-29	House at 1388 Sunbury Road
HP-30	House at 753 East Broad Street
HP-31	Huntington, Franz, House
HP-32	Indianola Junior High School
HP-33	Jefferson Avenue Historic District
HP-34	Jeffrey Manufacturing Company Office Building
HP-35	Jeffrey, Malcolm, House
HP-36	Johnson--Campbell House
HP-37	Jones, W. H., Mansion
HP-38	Joseph--Cherrington House
HP-39	Kahiki, The

Table D-3 Historic Sites within the General Study Area *(continued)*

MAP ID	NAME
HP-40	Kauffman, Linus B., House
HP-41	Kaufman, Frank J., House
HP-42	Levy, Soloman, House
HP-43	Lincoln Theatre
HP-44	Long and Third Commercial Building
HP-45	Lovejoy, Carrie, House
HP-46	Masonic Temple
HP-47	Miller, Frederick A., House-Broad Gables
HP-48	Morris, C. E., House
HP-49	Nafzger--Miller House
HP-50	New Indianola Historic District
HP-51	Ohio Farm Bureau Federation Offices
HP-52	Ohio Farm Bureau Federation Offices
HP-53	Old Governor's Mansion
HP-54	Old Port Columbus Airport Control Tower
HP-55	Pierce, Elijah, Properties
HP-56	Plaza Hotel
HP-57	Prentiss, Frederick, House
HP-58	Prentiss--Tulford House
HP-59	Pythian Temple and James Pythian Theater
HP-60	Saint Paul's Episcopal Church
HP-61	Schueller, Erwin W., House
HP-62	Scofield--Sanor House
HP-63	Seneca Hotel
HP-64	Sessions Village
HP-65	Sharp--Page House
HP-66	Shedd--Dunn House
HP-67	Shepard Street School
HP-68	Shiloh Baptist Church
HP-69	Smith, Benjamin, House
HP-70	St. Clair Hospital
HP-71	Theresa Building
HP-72	Thurber, James, House
HP-73	Trinity Episcopal Church
HP-74	Valley Dale Ballroom
HP-75	Welsbach Building
HP-76	Welsh Presbyterian Church
HP-77	Worthington United Presbyterian Church

Source: U.S. National Park Service, 2024; CMH Final Environmental Impact Statement, March 2009.

D.3 Preventative Local Land Use Controls

The following provides a brief discussion of the types of preventative land use controls available to the local jurisdictions to assist in reducing non-compatible land uses. Ultimately, it is the responsibility of the local jurisdictions to implement these land use controls. However, the CRAA is a willing partner in that effort and continually reaches out to the local jurisdictions to provide assistance.

Zoning

Zoning is one of the primary tools available to local communities to ensure land use compatibility. Zoning ordinances and regulations are intended to promote public health, safety, and welfare by regulating the use of the land within a jurisdiction based on factors such as land use compatibility and existing and expected socioeconomic conditions.

Subdivision Regulations

Subdivision regulations apply in cases where a parcel of land is proposed to be divided into lots or tracts, typically for the purpose of new development. Subdivision regulations are established to ensure the proper arrangement of streets, efficient movement of traffic, avoidance of congestion, adequate and convenient open space, sufficient and properly-located utilities, access for fire-fighting and rescue vehicles, and the orderly and efficient layout and use of land.

Subdivision regulations can be used to enhance noise-compatible land development by requiring developers to plat and develop land so as to minimize noise impacts or reduce the noise sensitivity of new development. The regulations can also be used to protect the airport proprietor from litigation for noise impacts at a later date. The most common requirement is the dedication of a noise or avigation easement to the airport owner by the land subdivider as a condition of development approval. The easement authorizes overflights of the property, with the noise levels attendant to such operations. This information is then attached to the property's plat notice so prospective buyers are made aware of the location of the property in relation to an airport.

Building Codes

Building codes regulate the construction of buildings, ensuring that they are built to safe standards. Sound attenuating properties may be required in new homes, offices, and institutional buildings to mitigate the effects of high aircraft noise levels. Building code requirements intended for energy efficiency also provide acoustical insulation benefits. Caulking of joints, continuous sheathing, dead air spaces, ceiling and wall insulation, solid core doors, and double-pane windows can attenuate aircraft noise while conserving energy used for home heating and cooling.

Not all sound insulation needs are met by typical energy-conserving building methods. For example, field research has found that some modern and highly energy-efficient storm window designs are less efficient for sound insulation than some older designs that allow for larger dead air spaces. Other sound insulation measures that may not be justifiable for energy efficiency are vent baffling and year-round, closed-window ventilation systems.

Building codes apply to existing buildings only when remodeling or expansion is contemplated. Amendments to building codes do not help to correct noise problems in developed areas. In developed areas, sound insulation must be applied retroactively to existing structures.

Capital Improvements Programs

Capital improvements programs are multi-year plans, typically covering five or six years, which list major capital improvements planned to be undertaken during each year. Most capital improvements have no direct bearing on noise compatibility; few municipal capital improvements are noise-sensitive.

The obvious exceptions to this are schools and, in certain circumstances, libraries, medical facilities, and recreational facilities.

Some capital improvements may have an indirect, but more profound, relationship to noise compatibility. For instance, sewer and water facilities may open up large vacant areas for private development of noise-sensitive residential uses. In contrast, the same types of facilities, sized for industrial users, could enable industrial development in a noise-impacted area that might otherwise be attractive for residential development.

Growth Risk Assessment

Before evaluating the impact of aircraft noise within the airport environs, it is important to understand the likelihood for the future development of residential and other noise-sensitive land uses, especially in the planning time frame. Understanding development trends in the airport vicinity is of critical importance in noise compatibility planning, because future residential growth can potentially constrain airport operations, if that growth occurs beneath aircraft flight tracks and within areas subject to high noise levels.

The growth risk analysis focuses primarily on undeveloped land which is planned and zoned for residential use. It is recognized that additional development may occur through in-filling and redevelopment of currently developed areas.

The methodology for analyzing potential growth risk is as follows:

- Identify all vacant, unplatted tracts of land zoned for future residential development with the greatest potential for being developed within the next five years.
- Calculate the area of the tracts; apply a factor accounting for development inefficiencies and the platting of streets; multiply by dwelling unit densities specified in the zoning ordinance; and multiply by household size to obtain the population holding capacity of presently vacant, unplatted land.
- Sum the above population holding levels to determine the total population holding capacity of the study area.

The final step in the growth risk analysis is to estimate whether the development is likely to occur before or after the year for which future noise exposure has been calculated. This tends to be quite speculative and should be regarded only as a general indicator of the potential risk of increases in land use incompatibility.

Fair Disclosure Policy

A method can be developed insuring that buyers of residential property within the airport environs receive fair disclosure of the location of the property relative to the airport by requiring that sellers of residential property in the airport environs deliver to buyers a purchase disclosure notice consisting of a copy of the Noise Overlay District Ordinance and Map with a statement that the property is located within the Airport Noise Overlay District. It may also require that all advertisements and listings for sale of residentially zoned or improved property in the Noise Overlay District include a statement about aircraft noise, such as -- “Not recommended for persons who may be easily disturbed by aircraft noise.” Finally, solicitation of voluntary inclusion of the notice in Multiple Listing Services by the real estate profession alerts potential buyers of property to the noise conditions.

D.3.2 Corrective Land Use Mitigation Alternatives

The following is a brief discussion of typical corrective or remedial land use mitigation alternatives included in Part 150 studies.

Sound Insulation

Sound insulation involves retrofitting an existing noise-sensitive structure with treatments designed to reduce interior noise levels. Typical treatments include installing additional insulation, baffling, sound-rated windows and doors, and sometimes installing central air conditioning to regulate interior temperature to allow windows to be kept closed in hot weather. A program for sound insulation of residences is always voluntary on part of the homeowner under a Part 150 program and is generally focused on residences located in a 65 DNL to 70 DNL noise contour. Other than the obvious benefit of reducing interior noise levels, a sound insulation program maintains the land use of the area and generally increases the value of the properties by maintaining the neighborhood continuity. Unfortunately, sound insulation treatments do not reduce the noise outside the residence and as such the benefits of the treatments are reduced when doors and windows are open.

Acquisition of Land or Interests in Land for Noise Compatibility

A program for property acquisition can be either voluntary (participation in the program is voluntary on the part of the property owner), or involve condemnation (local power of eminent domain). Acquisition as mitigation for noise impacts would always be voluntary under a Part 150 program. Acquisition programs can be designed to remove existing non-compatible land uses to convert the property to a compatible use, or to acquire undeveloped property to prevent it from being developed to a noise-sensitive use in the future.

Land Acquisition to Change Land Use

If the acquisition of property results in a change in land use, from incompatible to compatible with airport operations (e.g., airport/transportation, commercial, or industrial), the property owner would be eligible for relocation assistance and moving expenses, consistent with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act*. The property would be acquired, residents would be relocated, and the property would be converted to a compatible land use. This would prevent further development of incompatible land uses. The land acquisition program should assure that the subsequent land use is consistent with local land use plans and policies, including compatibility with noise exposure levels in the area. Because the acquisition is to result in a change in land use, the local jurisdiction may decide to apply its power of eminent domain.

Land Acquisition without Change to Land Use

The acquisition of incompatible property where no change in land use would result would be a “voluntary” acquisition program, where participation in the program would be voluntary on the part of the property owner. The reason for such a voluntary program is most often due to the owner’s inability to the sell the property at fair market value. Acquisition procedures would be implemented in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act;* however, because the program is voluntary, the owner selling the property would not be considered as displaced person and relocation benefits would not apply.

Purchase Assurance / Sales Assurance / Transaction Assistance

Purchase assurance, sales assurance, and transaction assistance are similar measures in which an airport sponsor provides assistance with the re-sale of a home to help homeowners that want to move out of an area near an airport. These measures would not change the land use and would typically also include sound insulation and conveyance of an avigation easement as a condition of the assistance.

Purchase assurance or guarantee is a program whereby the airport sponsor agrees to purchase a residence for fair market value should the owner be unable to sell the property on the open market because of noise levels. Participation in this program is voluntary on the part of the property owner and is implemented in areas where the land use is not going to change. The airport sponsor purchases the property at the appraised market value "as is" subject to airport noise. Typically, sound insulation is provided and the property is then listed and sold subject to the airport's avigation easement. A purchase assurance program requires an extensive property management and sales effort on the part of the Airport Operator and may be contracted with consultants and/or realtors.

Under sales assurance, the appraised market value of the homeowner's residence is guaranteed on a timely market sale; however, the airport does not acquire the property. Should the property sell for less than the appraised value, the selling owner is compensated for the shortfall by the Airport Operator. Property is appraised at its current market value "as is" subject to airport noise. The property is listed and sold subject to the airport's avigation easement that is conveyed to the Airport Operator at the sale of the property.

Transaction assistance generally involves an agreement by the Airport Operator to pay certain costs associated with the sale of residential property. Allowable costs are generally limited to the real estate sales commission. The property is listed and sold subject to the airport's avigation easement that is conveyed to the Airport Operator at the sale of the property.

The selling owner for purchase assurance/sales assurance/transaction assistance is not considered a "displaced person" and is not eligible for relocation assistance under the *Uniform Relocation Assistance and Real Property Acquisition Policies Act*.

Avigation Easements

Acquisition of avigation easements may be used to alleviate conflicts if no other land use controls are viable or in some cases, in lieu of outright acquisition of the land. The easement would be noted on the property deed and passed on to any subsequent owners of the property.

Amending local zoning and subdivision regulations to provide for the dedication of an easement to the airport sponsor as a condition of approval for residential rezoning or subdivision plats within the 65 DNL noise contour would alert developers, lenders, and prospective purchasers to the proximity of the airport and to the existence of a potential noise issue. The avigation easement would also protect the airport from future litigation by purchasers of the rezoned or subdivided property.

There is a constitutional issue raised by requiring dedication of an easement as well as imposing more vigorous and expensive standards for construction within the airport environs. Governments may not require a person to give up a constitutional right (i.e., a public use) in exchange for a discretionary benefit conferred by the government unless there is a reasonable relationship between a legitimate governmental objective and the condition that is imposed on the developer. Moreover, the exaction demanded by the permit or condition must be in proportion to the impact of the proposed development that is sought to be alleviated. Whether that balance exists requires an individualized determination. If it were determined not to meet these standards, then the legislation would either be unenforceable or its enforcement would constitute a taking requiring the payment of just compensation.

D.4 Existing Land Use Controls

Unlike many noise abatement measures, the implementation of Part 150 land use measures is not always under the control of the airport sponsor or the FAA. Therefore, it is necessary to understand the role local jurisdictions and planning organizations may play in implementing the Part 150 Noise Compatibility Program (NCP).

D.4.1 Role of Local Jurisdictions and Planning Organizations in Noise Compatibility Planning

Local planners and elected officials are typically responsible for local land use zoning and control. These entities and individuals prepare comprehensive plans, as well as review and implement zoning and land use regulations in a manner that may consider the effect of those actions as they relate to aviation activity and noise exposure.

The responsibility of regulating land use around an airport, in order to minimize existing and prevent future land use incompatibilities, is traditionally delegated to state and local governments. In addition to regulating land uses, local municipalities may facilitate the acquisition of property or the initiation of sound insulation programs as a means to mitigate and prevent future incompatible land uses resulting from airport noise. At airports with an approved Part 150 Study, an airport sponsor may apply directly to the FAA for funding of noise mitigation projects.

Local land use planners and elected officials were included in the membership of the Technical Advisory Committee (TAC) and participated in the study throughout the process. **Appendix G, *Public Involvement***, includes a summary of coordination with the land use planners and elected officials.

Implementation of the recommended land use measures LU-1, LU-2, and LU-10 is at the discretion of the CRAA and dependent upon FAA approval and funding. Implementation of the recommended measures LU-3 and LU-9 is solely at the discretion of the municipalities. Land use measure LU-12 requires coordination and approval by local jurisdictions.

D.4.2 Zoning Data Compilation

Specific zoning information from each jurisdiction within the GSA was collected and reviewed in order to identify tools for prohibiting incompatible development and encouraging compatible development near the Airport. The following sections summarize the zoning enforcement undertaken by each jurisdiction. **Table D-4** shows the generalized zoning categories (rural residential, low-density residential, medium to high-density residential, commercial, industrial, and recreational) as shown on the **Exhibit D-3** and the specific zoning classifications for each jurisdiction that are grouped into these generalized zoning categories.

Airport Environs Overlay

The previous Part 150 Study recommended the establishment of an Airport Environs Overlay (AEO) 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 subdistricts according to the 65+, 70+, and 75+ DNL as indicated by the most recently published NEM. Within these subdistricts, land use is regulated to prevent non-compatible development that is incompatible with high levels of aircraft noise. The overlay zone boundary changes accordingly with updates to the Noise Exposure Map (NEM) and is therefore not a fixed boundary. Specific regulations from each jurisdiction's zoning ordinance regarding the application of the AEO, if applicable, are discussed in the following sections.

Franklin County

Franklin County administers planning and zoning for the unincorporated areas including Mifflin and Truro Townships. Ohio Revised Code 303.02 enables County Commissioners to regulate building and land use in unincorporated territory for public purpose. The Franklin County Commissioners most recently amended and readopted the Franklin County Code in January 2014. In addition to standard overlay zones, the Franklin County Zoning Code includes the AEO District that restricts development of noise-sensitive land uses within noise impacted areas according to the latest published NEM.

City of Bexley

Zoning in the City of Bexley is set forth in the Codified Ordinances of Bexley, Part 12, Planning and Zoning Code which was last updated in November 2016. Much of the land in Bexley is zoned for either low to medium density residential. The City has no zoning regulations specific to airport noise compatibility.

City of Columbus

Land use development and zoning in the City of Columbus is guided by the City's Comprehensive Plan and neighborhood plans. Zoning restrictions are regulated by the Zoning Ordinance. Much of the area west of the airport is zoned medium density residential or industrial. Areas east of CMH have been annexed by the City of Columbus for the purpose of developing new residential subdivisions. The Columbus Zoning Ordinance includes an Airport Environs Overlay (AEO) zone that regulates development of noise-sensitive land uses corresponding to the most recently published NEM.

City of Gahanna

Zoning is guided by the City of Gahanna Land Use Plan, which was last updated in September 2019, and regulated by the Codified Ordinances of the City of Gahanna, Part Eleven, Planning and Zoning Code. Much of the city territory to the north and northeast of the airport is zoned as low- to medium-density residential. A business district is located to the north of the airport. To the east of the airport most of the land is zoned as commercial or industrial. The City has no zoning regulations specific to airport noise compatibility.

City of Reynoldsburg

The City of Reynoldsburg last amended its zoning code in February 2018. Much of the land within the General Study Areas is zoned low-density and medium-density residential. The City has no zoning regulations specific to airport noise compatibility.

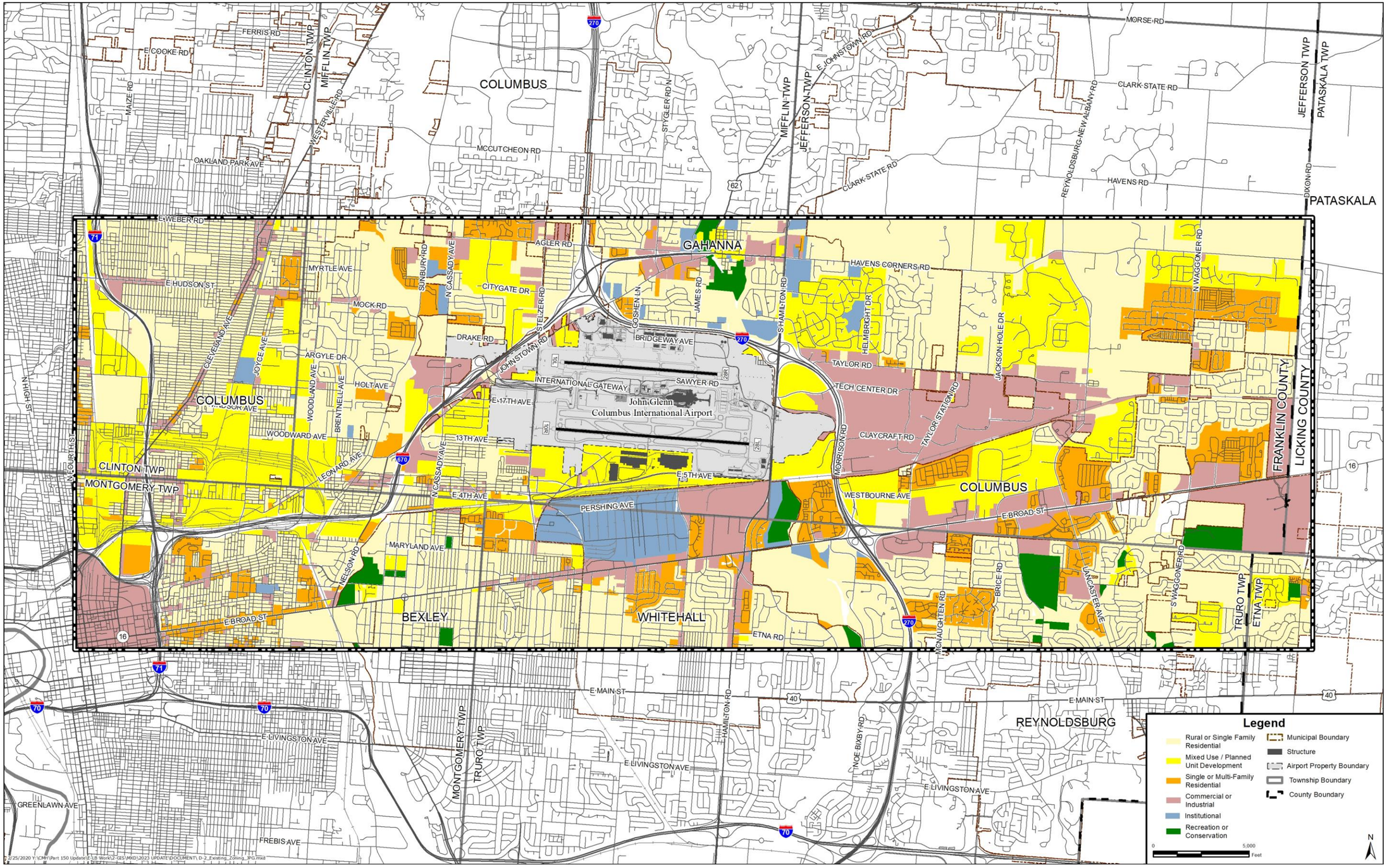
City of Whitehall

The City of Whitehall zoning regulations are established by the Codified Ordinances of the City of Whitehall, Part Eleven, Planning and Zoning Code. There is a mix of residential, commercial and industrial areas within the City. The City has no zoning regulations specific to airport noise compatibility.

Jefferson Township

Jefferson Township administers its zoning code through its Zoning Resolution, which was last amended in October 2015. Most of the land within the Township is zoned as low-density residential with an industrial area centered along Reynoldsburg-New Albany Road and the railroad.

Exhibit D-3 Generalized Existing Zoning



This page intentionally left blank

Table D-4 Generalized Zoning Classifications

GENERALIZED ZONING	ZONING DISTRICT CODE
City of Bexley	
Commercial / Industrial	GC - General Commercial
Mixed Use / Planned Unit Development	PUR - Planned Unit Multi-Family Residential
	MUC - Mixed Use Commercial
Recreation / Conservation	OS - Open Space District
Single Family Residential	R-1 - Low Density Single Family Residential
	R-2 - Intermediate Single Family Residential
	R-3 - Medium Density Single Family Residential
	R-6 - High Density Single Family Residential
City of Columbus	
Commercial / Industrial	C1 - Commercial
	C2 - Commercial
	C3 - Commercial
	C4 - Commercial
	C5 - Commercial
	CPD - Commercial
	DD - Downtown District
	EQ - Excavation/Quarrying
	LC1 - Commercial
	LC2 - Commercial
	LC3 - Commercial
	LC4 - Commercial
	LC5 - Commercial
	LP1 - Parking
	LP2 - Parking
	NE - Neighborhood Edge
	NG - Neighborhood General
	P1 - Parking
	P2 - Parking
	TC - Town Center
Institutional	I - Institutional
	LI - Institutional
	NC - Neighborhood Center
Mixed Use / Planned Unit Development	EFD - East Franklinton District
	LM - Manufacturing
	LM1 - Manufacturing
	LM2 - Manufacturing
	LMHP - Manufactured Home
	M - Manufacturing
	M1 - Manufacturing
	M2 - Manufacturing
	MHD - Manufactured Home
	MHP - Manufactured Home

Table D-4 Generalized Zoning Classifications *(continued)*

Generalized Zoning	Zoning District Code
City of Columbus, *(continued)*	
Recreation / Conservation	LUCRPD - Research Park
	UCRPD - Research Park
Single Family Residential	LR - Residential
	LR1 - Residential
	LR2 - Residential
	LR2F - Residential
	LR4 - Residential
	LRR - Residential
	LRRR - Residential
	LSR - Residential
	PUD6 - Residential
	R - Residential
	R1 - Residential
	R2 - Residential
	R2F - Residential
	R3 - Residential
	R3 - Single Family
	R4 - Residential
	RR - Residential
	RRR - Residential
	SR - Residential
Single and Multi-Family Residential	AR1 - Multi-family
	AR12 - Multi-family
	AR2 - Multi-family
	AR3 - Multi-family
	AR4 - Multi-family
	ARLD - Multi-family
	ARO - Multi-family
	LAR1 - Multi-family
	LAR12 - Multi-family
	LAR2 - Multi-family
	LAR3 - Multi-family
	LAR4 - Multi-family
	LARLD - Multi-family
	LARO - Multi-family
	PC - Multi-family
	PUD2 - Multi-family
	PUD4 - Multi-family
	PUD6 - Multi-family
	PUD8 - Multi-family

Table D-4 Generalized Zoning Classifications *(continued)*

Generalized Zoning	Zoning District Code
City of Gahanna	
Commercial/ Industrial	CC - Community Commercial
	CC-2 - Community Commercial- Modified
	CS - Community Service
	NC - Neighborhood Commercial
	OCT - Office, Commerce, and Technology District
	PCC - Planned Commercial Center
	PID - Planned Industrial District
	SO - Suburban Office
Institutional	RID - Restricted Institutional District
	RID - Restricted Institutional District
Mixed Use / Planned Unit Development	CX-1 - Neighborhood Commercial Mixed Use
	OG-2 - Olde Gahanna Mixed Use Neighborhood District
	PCD - Planned Corporate Mixed-Use District
	PRCD - Planned Residential-Comm. Mixed Use District
	PUD - Planned Unit Development
	SCPD - Select Community Planned District
Recreation / Conservation	OG-3 - Olde Gahanna Recreation
Single Family Residential	ER-1 - Estate Residential
	ER-2 - Estate Residential
	OG-1 - Olde Gahanna Single Family Residential
	PRD - Planned Residential District
	R-4 - Single Family Residential
	SF-1 - Estate Residential
	SF-2 - Single Family Residential
	SF-3 - Single Family Residential
Single and Multi-Family Residential	MFRD - Multi-Family Residential
	MFRD - Multiple Family Residential
	MR-1 - Two Family Residential
City of Reynoldsburg	
Commercial / Industrial	CC - Community Commerce
	CS - Community Services
	GI - General Industry
	NC - Neighborhood Commerce
	RI - Restricted Industry
Mixed Use / Planned Unit Development	R-3;PD - Planned Development
Recreation/ Conservation	S-1 - Special
Single Family Residential	R-1 - Residence Single
	R-2 - Residence Single
	R-3 - Residence Single
Single and Multi-Family Residential	AR-2 - Residence Multiple
	AR-3 - Residence Multiple
	R-20 - Townhouse
	R-4 - Residence Single and Double

Table D-4 Generalized Zoning Classifications *(continued)*

Generalized Zoning	Zoning District Code
City of Whitehall	
Commercial / Industrial	OD - Office District
	GCD - General Commerce District
	LCD - Limited Commerce District
	I1 - Restricted Industrial District
	I2 - Limited Industrial District
Institutional	EU - Exceptional Use District
Mixed Use / Planned Unit Development	PAD - Planned Apartment District
Recreation / Conservation	FP - Flood Plain District
Single Family Residential	R0 - Residential Estate District
	R1 - Residential District
	R2 - Residential District
	R3 - Residential District
	R4 - Residential District
Single and Multi-Family Residential	A1 - Apartment District
	A2 - Apartment District
Jefferson Township	
Commercial / Industrial	CS - Community Service
	LI - Limited Industrial
	NC - Neighborhood Commercial
	PIP - Planned Industrial Park
	RI - Restricted Industrial
	SO - Suburban Office
Mixed Use / Planned Unit Development	EU - Exceptional Use
	PC - Planned Commercial
	PRD - Planned Residential District
	PRS - Planned Suburban Residential District
Single Family Residential	CSRD - Countryside Residential District
	RSRD - Restricted Suburban Residential District
Single and Multi-Family Residential	SPRD - Suburban Periphery Residential District
Mifflin & Truro Townships	
Commercial / Industrial	CS - Community Service
	NC - Neighborhood Commercial
	SO - Suburban Office
	SCPD - Select Commercial Planned District
	SPCD - Select Commercial Planned District
	LI - Limited Industrial
	PIP - Planned Industrial Park
	CC - Community Commercial
Mixed Use / Planned Unit Development	SO - Suburban Office and Institutional
Single Family Residential	R - Rural
	R-8 - Restricted Urban Residential
	R-12 - Urban Residential
Single and Multi-Family Residential	R-24 - Suburban Apartment Residential

D.5 FAA Land Use Planning Guidelines

While the FAA can provide assistance and funding to encourage compatible land development around airports, it has no regulatory authority for controlling land uses to protect airport capacity. The FAA recognizes that state and local governments are responsible for land use planning, zoning, and regulation including that necessary to provide land use compatibility with airport operations. However, pursuant to the Federal Airport and Airway Development Act, as a condition precedent to approval of an FAA-funded airport development project, the airport sponsor must provide the FAA with written assurances that "...appropriate action, including the adoption of zoning laws have been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations including landing and takeoff of aircraft...."[47] The Federal Government has enacted regulations and the FAA has implemented policies designed to improve airport land use compatibility as described in **Appendix A**.

[47] 49 U.S.C. § 47107(a)(10), formerly Section 511(a)(5) of the 1982 Airport Act

This page intentionally left blank

Appendix E - Noise Abatement Alternatives

This Appendix provides information on the alternative noise abatement measures that were reviewed for inclusion in the John Glenn Columbus International Airport (CMH) Noise Compatibility Program (NCP). Each measure was evaluated for the anticipated benefits and drawbacks associated with its implementation.

E.1 Potential Noise Abatement Alternatives

The following list includes examples of the types of alternatives that were considered for inclusion in the NCP.

Flight Track Changes

- Potential divergent turns
- Alternate Corridors

Operational Procedures

- Preferential Runway Use – Direction East versus West flow
- Preferential Runway Use – North versus South runway
- Continuous descent approach
- Steeper departure profiles
- Flight management procedures
- Curfews

Facility Modifications

- Noise barriers
- Runup Locations

A list of noise abatement alternatives was developed based on discussion with CRAA, FAA ATCT, and Technical Advisory Committee (TAC) representatives, as well as a review of alternatives that were previously considered in the 2007 Part 150 Study. Some alternatives that were rejected in the 2007 Part 150 Study were re-evaluated to determine if conditions had changed that would make the alternative feasible. This evaluation took into account situations in which an alternative may shift overflights and noise from one area to another. The effect of shifting noise and overflights from one area to another was considered to not be a favorable solution. Other factors that were considered in the evaluation of alternatives were effects on airfield and airspace safety and efficiency.

The following pages provide a description of each alternative evaluated, along with an assessment of the benefits, drawbacks, and a recommendation. The list includes Measures NA-1 through NA-9, which are the currently approved noise abatement measures from the 2007 NCP Update. Measure NA-5 was previously withdrawn. Seven additional alternatives from the 2007 Part 150 Study were evaluated. These alternatives are labeled NA-A through NA-G.

E.2 Currently-Approved Land Use Measures

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-1 (CURRENTLY APPROVED MEASURE)

Description: 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.

Status: This measure is currently implemented. Run-ups are performed at the NetJets facility.

Recommendation: Continue approved measure NA-1.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-2 (CURRENTLY APPROVED MEASURE)

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.

Status: This measure is currently implemented. Implemented – A run-up barrier is used at the NetJets facility..

Recommendation: Continue approved measure NA-2.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-3 (CURRENTLY APPROVED MEASURE)

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.

Status: 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.

Recommendation: Continue approved measure NA-3.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-4 (CURRENTLY APPROVED MEASURE)

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.

Status: This measure is 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.

Recommendation: Continue approved measure NA-4.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-6 (CURRENTLY APPROVED MEASURE)

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.

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

Recommendation: Continue measure with modification to include proposed Airport Land Use Management District (ALUMD). See Alternative LU-B for more information on the ALUMD.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-7 (CURRENTLY APPROVED MEASURE)

Description: 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.

Recommendation: Continue approved measure NA-7.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-8 (CURRENTLY APPROVED MEASURE)

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

Status: 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.

Recommendation: Withdraw measure.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-9 (CURRENTLY APPROVED MEASURE)

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

Status: This measure was not implemented. 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.

Recommendation: Continue measure – Measure would be implemented in the event a larger run-up barrier is ever needed in the southeast airfield.

Table E-1 Future (2029) Baseline Housing, Population, and Noise-Sensitive Facility Incompatibilities

	60-65 DNL*	65-70 DNL	70-75 DNL	75+ DNL	65+ DNL
Housing Units					
Columbus	**4,034**	**1**	**0**	**0**	**1**
Mitigated	720	0	0	0	0
Sound Insulated	682	0	0	0	0
Easement	38	0	0	0	0
Unmitigated	3,314	1	0	0	1
Eligible for Sound Insulation but not Insulated	141	0	0	0	0
Not Previously Mitigated	3,173	1	0	0	1
Mifflin Township	**57**	**0**	**0**	**0**	**0**
Mitigated	35	0	0	0	0
Sound Insulated	35	0	0	0	0
Easement	0	0	0	0	0
Unmitigated	22	0	0	0	0
Eligible for Sound Insulation but not Insulated	11	0	0	0	0
Not Previously Mitigated	11	0	0	0	0
Gahanna	**313**	**1**	**0**	**0**	**1**
Mitigated	0	0	0	0	0
Sound Insulated	0	0	0	0	0
Easement	0	0	0	0	0
Unmitigated	313	1	0	0	1
Eligible for Sound Insulation but not Insulated	0	1	0	0	1
Not Previously Mitigated	313	0	0	0	0
Jefferson Township	**146**	**0**	**0**	**0**	**0**
Mitigated	12	0	0	0	0
Sound Insulated	0	0	0	0	0
Easement	12	0	0	0	0
Unmitigated	134	0	0	0	0
Eligible for Sound Insulation but not Insulated	0	0	0	0	0
Not Previously Mitigated	134	0	0	0	0
Total Housing Units	**4,550**	**2**	**0**	**0**	**2**
Population					
Total Population	9,920	5	0	0	5
Noise-Sensitive Facilities					
Churches / Places of Worship	20	0	0	0	0
Schools / Educational Facilities	8	1	0	0	1
Libraries	0	0	0	0	0
Hospitals	0	0	0	0	0
Nursing Homes	1	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 3b computer model.

Housing counts are based on field verification.

Population numbers are estimated based on the housing counts multiplied by the average household size from the 2010 Census.

Source: Landrum & Brown, 2020.

E.3 Consideration of Alternative Noise Abatement Measures

The following pages describe alternative noise abatement measures that were considered in this Part 150 Study. While not all alternatives may be practical or achievable, potential alternatives were considered in accordance with 14 CFR Part 150 §150.23(e) and §B150.7.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-A

TITLE:	When wind, weather, and operational conditions allow, nighttime (10:00 p.m. to 7:00 a.m.) arrivals use visual side step approach to Runway 28L.

BACKGROUND AND INTENT:	Current nighttime procedures recommend the use of Runway 10R/28L with the exception of pilot requests and during the morning hours. Standard approach procedures (straight-in from the outer marker) are used for nighttime jet arrivals. This alternative would modify the current nighttime procedures by implementing a side-step approach to Runway 28L. This would be implemented as a visual approach only during conditions where pilots could see both runways from three miles or more. The intent of this procedure is to direct aircraft over more compatible land uses during the nighttime. Review of the land uses east of the airport finds that the area aligned with the north runway is generally more compatible than the area aligned with the south runway.

BENEFITS:	This alternative would direct more overflights over a more compatible corridor (i.e. industrial uses and railroad alignment).

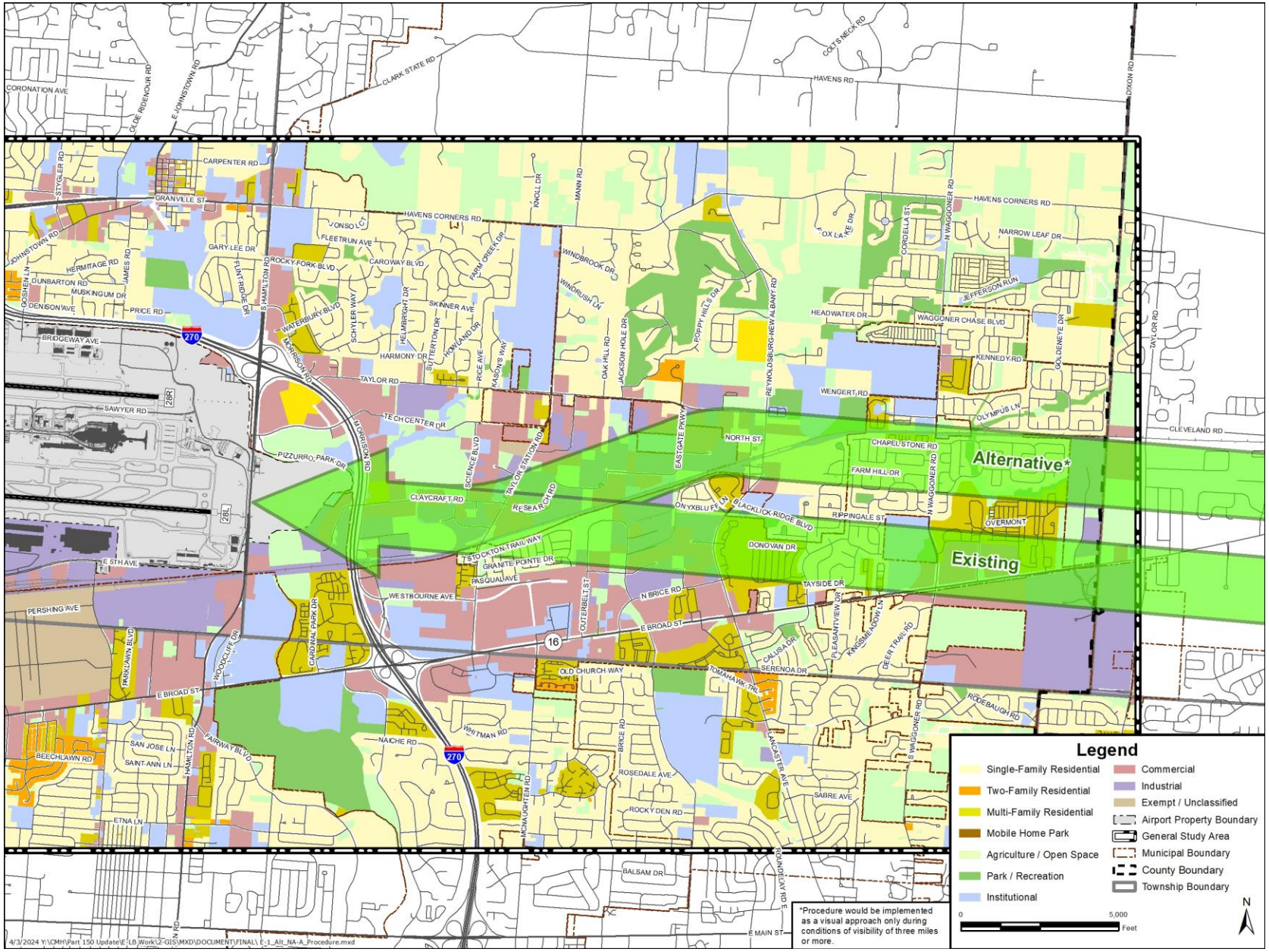
DRAWBACKS:	This alternative was reviewed in the 2007 Part 150 Study. Coordination with ATCT and pilots determined that the procedure was not desirable due to operational and safety factors.

COST TO IMPLEMENT:	The cost for additional training, development, and publication of new procedures, and changing approach plates at radar positions would be the responsibility of the FAA.

EVALUATION METHOD:	Qualitative assessment

FINDINGS AND RECOMMENDATIONS:	Due to the concerns of ATCT and pilots, the alternative is **NOT RECOMMENDED** for further evaluation.

Exhibit E-1 Alternative NA-A Flight Corridor



This page intentionally left blank

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-B

TITLE:	Implement a 40-degree divergent turn off of Runway 10R, after crossing the runway end to a 140-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. This alternative proposes a 40-degree right turn off of Runway 10R. It was recognized that this turn would only be used when air traffic warrants the need for an additional heading.

BENEFITS:	This procedure would increase capacity and reduce delays, during peak operating periods, by giving ATCT an additional heading.

DRAWBACKS:	The alternative was reviewed during the 2007 Part 150 Study which determined that it would cause airspace conflicts with Rickenbacker International Airport (LCK).

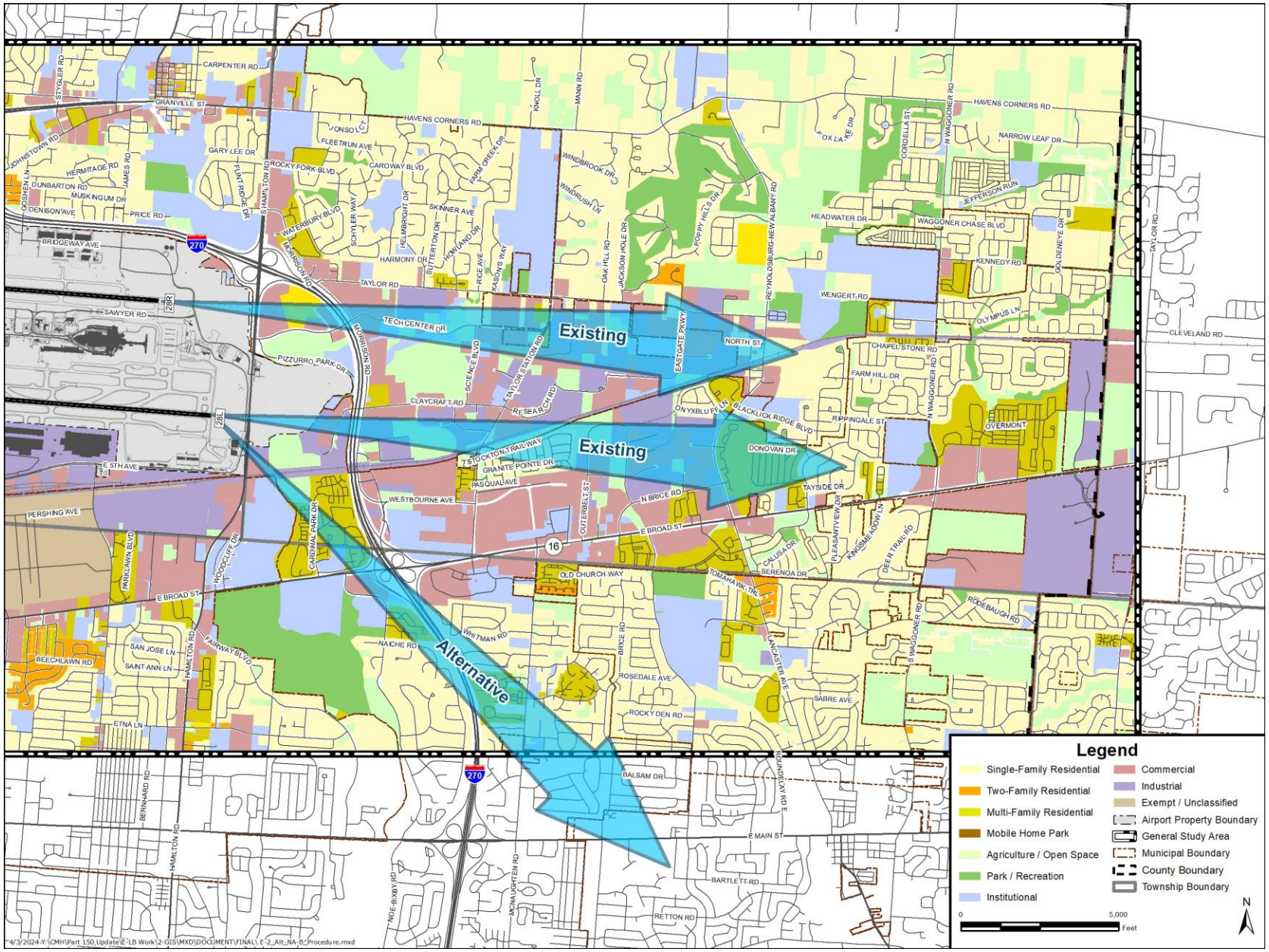
COST TO IMPLEMENT:	The cost for additional training, development, and publication of new procedures would be the responsibility of the FAA.

EVALUATION METHOD:	Qualitative assessment

FINDINGS AND RECOMMENDATIONS:	Due to the conflicts with Rickenbacker International Airport, the alternative is **NOT RECOMMENDED** for further evaluation.

This page intentionally left blank

Exhibit E-2 Alternative NA-B Flight Corridor



This page intentionally left blank

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-C

TITLE:	All southbound traffic departing Runway 10R turn right and follow the Interstate 270 corridor.

BACKGROUND AND INTENT:	Current procedures instruct aircraft to fly runway heading until reaching five miles or 3,500 feet AGL. This procedure would take advantage of a more compatible corridor southeast of the airport along I-270.

BENEFITS:	This procedure would reduce overflights for those areas located along the Runway 10R centerline.

DRAWBACKS:	The alternative would cause airspace conflicts with Rickenbacker International Airport (LCK).

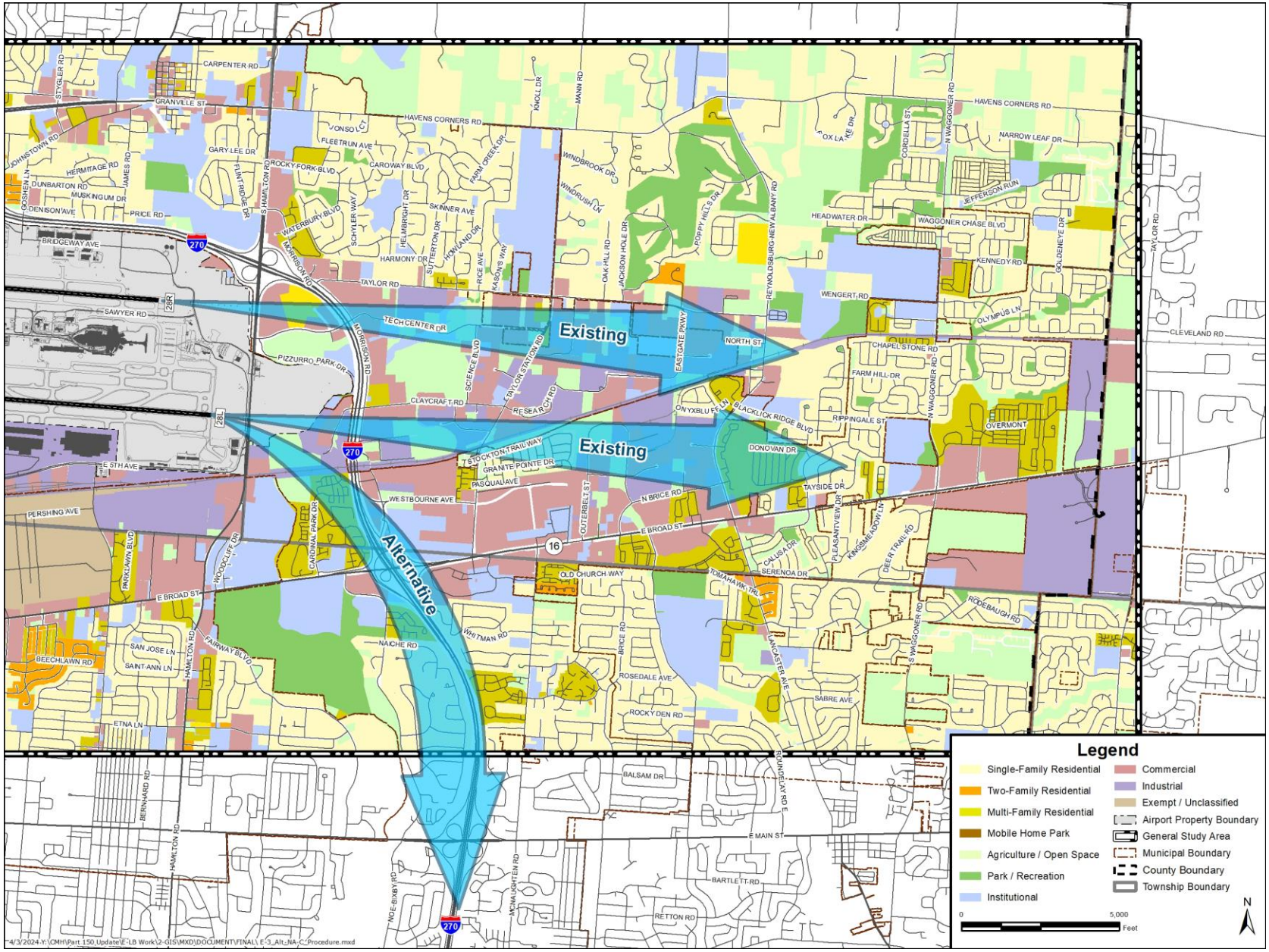
COST TO IMPLEMENT:	The cost for additional training, development, and publication of new procedures would be the responsibility of the FAA.

EVALUATION METHOD:	Qualitative assessment

FINDINGS AND RECOMMENDATIONS:	Due to the conflicts with LCK, the alternative is **NOT RECOMMENDED** for further evaluation.

This page intentionally left blank

Exhibit E-3 Alternative NA-C Flight Corridor



This page intentionally left blank

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-D

TITLE:	All southbound traffic departing Runway 28L turn left and follow the I-670 / I-70 corridor.

BACKGROUND AND INTENT:	Current procedures instruct aircraft to fly runway heading until reaching five miles or 3,500 feet AGL. This procedure would route aircraft over the I-670 and I-70 corridors to take advantage of the more compatible corridor.

BENEFITS:	This procedure would reduce overflights for those areas located along the Runway 28L centerline.

DRAWBACKS:	The alternative would shift overflights from one area to another.

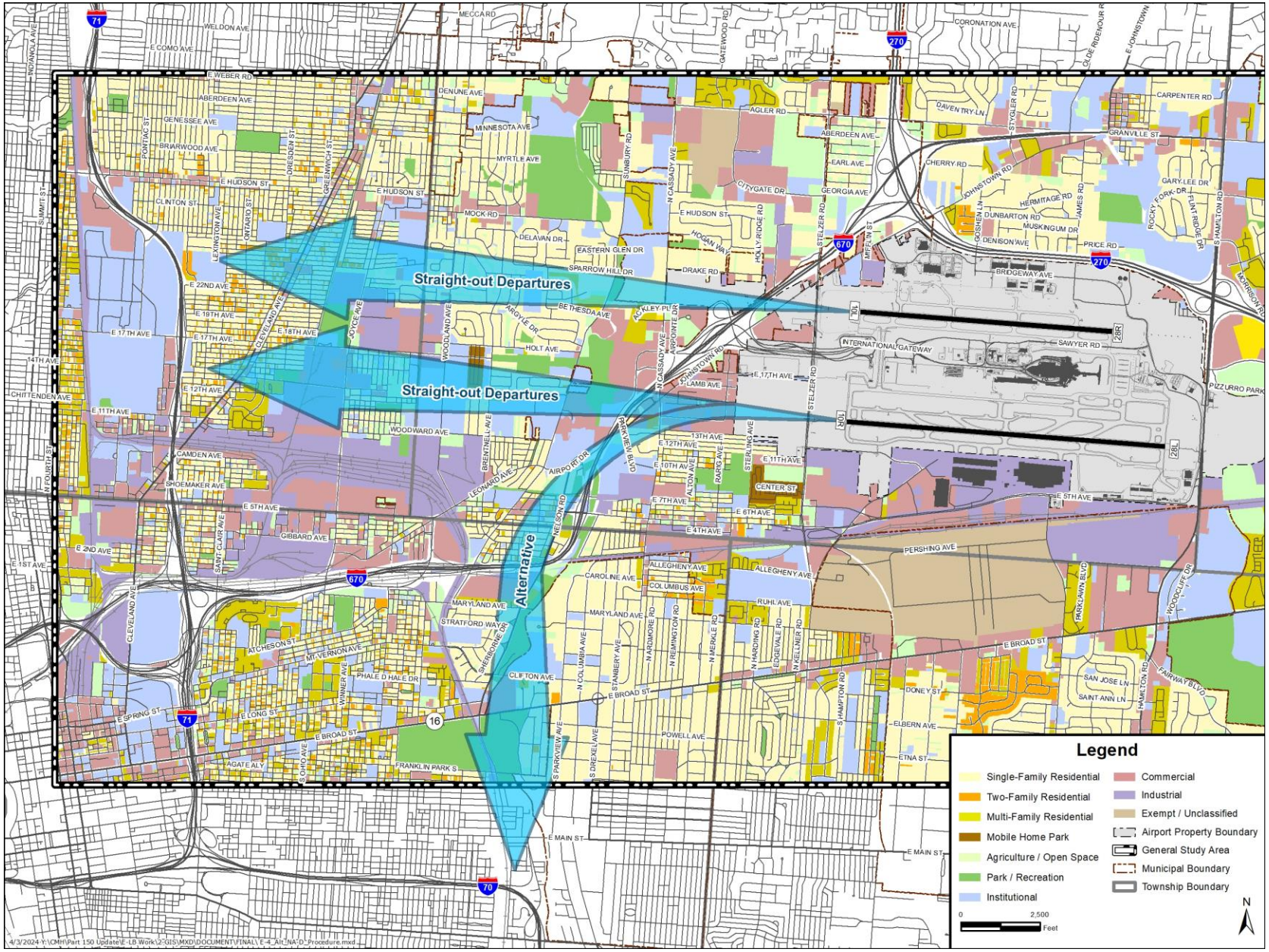
COST TO IMPLEMENT:	The cost for additional training, development, and publication of new procedures would be the responsibility of the FAA.

EVALUATION METHOD:	Qualitative assessment

FINDINGS AND RECOMMENDATIONS:	Due to shifting of overflights from one area to another, this alternative is **NOT RECOMMENDED** for further evaluation.

This page intentionally left blank

Exhibit E-4 Alternative NA-D Flight Corridor



This page intentionally left blank

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-E

TITLE:	Designate Runway 10L/28R as the preferential runway.

BACKGROUND AND INTENT:	At CMH, the selection of runway is based in large part on the length of the runway, the gate parking location, and the origin or destination of the flight. In general, airlines that are located on the north side of the terminal prefer the north runway and likewise for the airlines on the south side of the terminal. Heavier aircraft and those with farther destinations will prefer the longer runway (10R/28L). Based on these factors, Runway 10R/28L is currently the most heavily used runway. This alternative would identify Runway 10L/28R as the preferential runway. However, due to the length of Runway 10L/28R and its location in proximity to the terminal, it is unlikely that implementation would result in runway use notably different than what is currently occurring.

BENEFITS:	This alternative could reduce noise for the areas southeast and southwest of the airport if it was feasible to implement.

DRAWBACKS:	As mentioned above, it is unlikely that this alternative would result in any notable change in runway use. If it did however, the change would be a direct shift of noise from the communities in line with the south runway to the communities in line with the north runway.

COST TO IMPLEMENT:	None

EVALUATION METHOD:	Qualitative assessment

FINDINGS AND RECOMMENDATIONS:	Due to the effect of shifting noise from one area to another, this alternative is **NOT RECOMMENDED** for further evaluation.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-F

TITLE:	Designate Runway 10R/28L as the preferential runway.

BACKGROUND AND INTENT:	At CMH, the selection of runway is based in large part on the length of the runway, the gate parking location, and the origin or destination of the flight. In general, airlines that are located on the north side of the terminal prefer the north runway and likewise for the airlines on the south side of the terminal. Heavier aircraft and those with farther destinations will prefer the longer runway (10R/28L). Based on these factors, Runway 10R/28L is currently the most heavily used runway. This alternative would identify Runway 10R/28L as the preferential runway. However, due to the large number of airlines located on the north side of the terminal, it is unlikely that implementation would result in runway use notably different than what is currently occurring.

BENEFITS:	This alternative could reduce noise for the areas northeast and northwest of the airport if it was feasible to implement.

DRAWBACKS:	As mentioned above, it is unlikely that this alternative would result in any notable change in runway use. If it did however, the change would be a direct shift of noise from the communities in line with the south runway to the communities in line with the north runway.

COST TO IMPLEMENT:	None

EVALUATION METHOD:	Qualitative assessment

FINDINGS AND RECOMMENDATIONS:	Due to the effect of shifting noise from one area to another, this alternative is **NOT RECOMMENDED** for further evaluation.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE NA-G

TITLE:	Implement Airport Operational Restrictions (Part 161).

BACKGROUND AND INTENT:	This alternative considers the potential for implementing airport access restrictions for noise abatement. These may include curfews or restrictions on aircraft types or groups. Any such action is subject to the provisions of Part 161, which requires extensive proof of benefits relative to costs prior to approval by the FAA. Typically, these types of studies have resulted in lawsuits and to date, none have been officially approved by the FAA.

BENEFITS:	These restrictions can resolve noise annoyance problems during the most sensitive periods or of the most annoying events.

DRAWBACKS:	Part 161 requires extensive additional evaluation, with little hope of approval, given the FAA's current stance on Part 161 actions.

COST TO IMPLEMENT:	A comprehensive Part 161 study would cost $3 to $5 million. Litigation could cost a similar amount.

EVALUATION METHOD:	Qualitative assessment

FINDINGS AND RECOMMENDATIONS:	Due to the high costs associated with conducting a Part 161 and the fact that the FAA has never officially approved a Part 161, the alternative is **NOT RECOMMENDED** for further evaluation.

This page intentionally left blank

Appendix F - Land Use Alternatives

The subsequent pages provide information on the current land use management and mitigation measures from the previous Noise Compatibility Plan (NCP) and an additional measure that was considered for inclusion in the Updated Part 150 NCP. The implementation status of the current measures was determined and updates were recommended where appropriate. The proposed measure was evaluated for the anticipated benefits and costs associated with its implementation. The measures were reviewed with the membership of the Planning Advisory Committee (PAC). The local planning professionals were invited to meet with the consultant if they had any questions or concerns. Copies of all of the materials that were sent are located in **Appendix G, *Public Involvement***.

F.1 Potential Land Use Controls

Land use controls fall into two categories, preventative and corrective. Preventive land use management techniques seek to prevent the introduction of additional noise-sensitive land uses within existing and future airport noise contours. Corrective or remedial measures are intended to convert existing, non-compatible uses to compatible uses. These potential measures are discussed in **Appendix D** and summarized below:

Preventative

- Compatible Use Zoning
- Subdivision Regulations
- Building Codes
- Capital Improvement Programs
- Growth Risk Assessment
- Fair Disclosure Policies

Corrective

- Sound Insulation
- Land Acquisition
- Purchase Guarantee
- Avigation Easements

The following pages provide a description of each land use alternative evaluated, along with an assessment of the benefits, drawbacks, and a recommendation. Measures LU-1 through NA-12 are the currently approved land use measures from the 2007 NCP Update. Measure LU-11 was previously withdrawn.

F.2 Currently-Approved Land Use Measures

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-1
(CURRENTLY APPROVED MEASURE)

Description: 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: This measure was implemented. The boundary was updated based on the 2007 NEM/NCP Update. The CRAA has sound insulated nearly 800 housing units through this program. 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.

Recommendation: Continue measure with modification of program boundary based on the 65 DNL noise contour for the Future (2029) NEM/NCP Noise Exposure Contour. 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.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-2
(CURRENTLY APPROVED MEASURE)

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

Status: This measure was implemented. Two churches were identified within the 65 DNL of the 2002 Part 150 noise compatibility study. One church, the Wonderland Community Church, is located to the northeast of CMH. The CRAA purchased an avigation easement on the property and it is now considered a compatible land use. The Mount Judia Church located east of CMH on Morrison Road 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 from the 2007 Part 150 Study.

Recommendation: Continue approved measure LU-2. No churches are located within the 65+ DNL of the Future (2029) NCP Noise Exposure Contour

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-3
(CURRENTLY APPROVED MEASURE)

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.

Status: The measure was 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.

Recommendation: Continue approved measure LU-3.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-4
(CURRENTLY APPROVED MEASURE)

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).

Status: This measure was not implemented. Both Columbus and Franklin County set the AEO boundary at the 65 DNL contour.

Recommendation: Continue measure with modification to include proposed Airport Land Use Management District (ALUMD). See Measure LU-12 for more information on the ALUMD.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-5
(CURRENTLY APPROVED MEASURE)

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.

Status: 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.

Recommendation: Continue approved measure LU-5.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-6
(CURRENTLY APPROVED MEASURE)

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.

Status: This measure was not implemented. Coordination with local jurisdictions has occurred; however, zoning regulations have not been updated.

Recommendation: Continue approved Measure LU-6. See Measure LU-12 for more information on the ALUMD.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-7
(CURRENTLY APPROVED MEASURE)
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).

Status: This measure was not implemented. Coordination with local jurisdictions has occurred; however, subdivision regulations have not been updated.

Recommendation: Continue approved Measure LU-7. See Measure LU-12 for more information on the ALUMD.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-8
(CURRENTLY APPROVED MEASURE)

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).

Status: This measure was not implemented. Coordination with local jurisdictions has occurred; however, building codes have not been updated.

Recommendation: Continue approved Measure LU-8. See Measure LU-12 for more information on the ALUMD.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-9
(CURRENTLY APPROVED MEASURE)

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).

Status: This measure was not implemented.

Recommendation: Continue approved Measure LU-9. See Measure LU-12 for more information on the ALUMD.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-10
(CURRENTLY APPROVED MEASURE)

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

Status: This measure was not implemented.

Recommendation: The ALUMD has not been adopted. The CRAA makes the noise exposure maps and other noise compatibility information available on its website.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-12
(CURRENTLY APPROVED MEASURE)

Description: 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.

Status: This measure was 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.

Recommendation: Continue approved measure LU-12.

F.3 Consideration of Alternative Land Use Measures

The following pages describe alternative land use measures that were considered in this Part 150 Study in accordance with 14 CFR Part 150 §150.23(e) and §B150.7.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-A

TITLE:	Purchase vacant properties within the 65+ DNL to prevent the development of new incompatible land uses.

BACKGROUND AND INTENT:	Several areas of vacant land have been identified within the 65+ DNL. Previous Part 150 Study Updates have recommended purchasing vacant property to prevent new incompatible development from occurring, including areas east of Hamilton Road to the south and southwest of I-270 in the City of Gahanna. Other areas of vacant property within the 65+ DNL occur along Taylor Station Road to the east of CMH in the City of Gahanna; and along Johnstown Road to the west of CMH in Franklin County (Mifflin Township).

BENEFITS:	This measure would prevent potential new incompatible development within the 65+ DNL.

DRAWBACKS:	This measure would be costly to implement because land is being sold in these areas at commercial values much higher than residential land value.

FINDINGS AND RECOMMENDATIONS:	Coordination is ongoing with the City of Gahanna and Franklin County as described in the existing land use measures to ensure any new development is compatible with airport operations. Due to costs and other planning efforts, acquisition is not recommended at this time. Therefore, this alternative is **NOT RECOMMENDED** for inclusion in the NCP.

NOISE COMPATIBILITY PROGRAM ALTERNATIVE LU-B

TITLE:	Modify the sound insulation program boundaries identified in approved measure LU-1 and LU-2 to reflect the Future (2029) NEM/NCP Noise Exposure Contour.

BACKGROUND AND INTENT:	This alternative recommends modification to Measure LU-1 and LU-2 to redraw the program boundary based on the 65 DNL noise contour for the Future (2029) NEM/NCP Noise Exposure Contour. There are no housing units, schools, or churches located within the 65+ DNL of the Future (2029) NEM/NCP Noise Exposure Contour. Therefore, no housing units or other noise-sensitive land uses 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.

BENEFITS:	This measure continues the policy of the CRAA to provide sound insulation for eligible properties within the 65+ DNL. At this time no eligible properties have been identified.

DRAWBACKS:	Sound insulation does not alter the noise impacts outside the home.

FINDINGS AND RECOMMENDATION:	This alternative is **RECOMMENDED** for inclusion in the NCP, which would modify approved measures LU-1 and LU-2.

Appendix G - Public Involvement

The process of providing opportunities for public review and comment during the development of the Noise Exposure Maps (NEMs) and the Noise Compatibility Program (NCP) includes four techniques: committee meetings, focus group meetings, Public Information Workshops, and a formal Public Hearing. Each technique facilitates the active and direct participation of members of the public and the opportunity for them to submit comments to the Columbus Regional Airport Authority (CRAA). As noted in Chapter One, Background, this Part 150 Noise Compatibility Study was originally submitted to FAA in September 2021; however, because of the delays due to COVID-19 and age of the forecast, FAA requested an update be prepared. Therefore, this Appendix describes the public outreach process undertaken in 2019-2021 and the outreach conducted in 2024-25, including two sets of public hearings (July 2021 and January 2025).

This appendix provides the information related to the public involvement process undertaken during the CMH Part 150 Noise Compatibility Study Update and is divided into the following sections:

- Technical Advisory Committee (TAC)
  - Membership
  - Meetings
- Discussion of the Public Information Meetings
- Discussion of the Public Hearings
  - July 2021 Public Hearing
  - January 2025 Public Hearing
- Location of Study Documents for Public Review
- July 2021 Public Hearing comments received and response to comments
- January 2025 Public Hearing comments received and response to comments

G.1 Technical Advisory Committee

A Technical Advisory Committee (TAC) was established by the CRAA and was composed of representatives of local agencies; Airport Traffic Control Tower (ATCT) staff; airport users; representatives from the local community; and CRAA staff. The TAC advised CRAA staff, and the Consultant Team on the analysis and recommendations of the Part 150 Noise Compatibility Study through meetings and review of analysis, findings, and recommendations. Table G-1 lists the TAC membership.

Table G-1 Technical Advisory Committee (TAC) Membership

Name	Title	Organization
Voda Layne	Airline Station Manager	Air Canada Express
Kyle Lewis	Regional Manager, Government Affairs & Airport Advocacy, Great Lakes	Aircraft Owners and Pilots Association (AOPA)
Duffy Cooper	Pilot Representative	Airline Pilots Association (ALPA)
Ken Copley	Pilot Representative	Airline Pilots Association (ALPA)
Laura Rinaldi McKee	Vice President, Airport Affairs	Airlines for America

Table G-1 Technical Advisory Committee (TAC) Membership, *(continued)*

Name	Title	Organization
Paul McGraw	Vice President, Operations and Safety	Airlines for America
Sherriale Fleming	Airline Station Manager	Alaska Airlines
Christiane Thinnes	Airline Station Manager	Alaska Airlines
Dilli Dhital	Airline Station Manager	American Airlines
Robert Walters	Airline Station Manager	American Airlines
Marci VanDusen	Airline Station Manager	American Airlines
Alfonso Hooper	Chair	Brittany Hills Civic Association
Ben Kessler	Mayor & Director of Development	City of Bexley
Carla Williams-Scott	Director, Department of Neighborhoods	City of Columbus
Todd Dieffenderfer	Deputy Director, Department of Neighborhoods	City of Columbus
DeLana Scales	Program Specialist, Department of Neighborhoods	City of Columbus
Tony Celebrezze	Assistant Director, Building and Zoning Services	City of Columbus
Rory McGuinnes	Deputy Director of Administration	City of Columbus
Talisa Dixon	Superintendent	Columbus City Schools
John Stanford	Deputy Superintendent	Columbus City Schools
Erik Roush	Policy & Government Affairs	Columbus City Schools
Michael Blackford	Planning and Zoning Administrator	City of Gahanna
Andrew Bowsher	Development Director	City of Reynoldsburg
Zach Woodruff	Director of Economic Development & Public Service	City of Whitehall Planning Commission
Christina White	Airline Station Manager	Delta Airlines
Faiz Syed	Airline Station Manager	Delta Airlines
Rashad Armstrong	Airline Station Manager	Delta Airlines
Robert Gesterling	Airline Station Manager	Delta Airlines
Michael Johnson	President	East Columbus Civic Association
Lamar Peoples	Member	East Columbus Civic Association
Katherine Delaney	Community Planner	FAA - Detroit Airports District Office
Mark Grennell	Program Manager	FAA - Detroit Airports District Office
Barry Payne	Air Traffic Manager	FAA CMH ATCT
Dave Neef	Air Traffic Manager	FAA CMH ATCT
Steve Mack	Air Traffic Manager	FAA CMH ATCT
Ronny Richards	Operations Manager	FAA CMH ATCT
James Schimmer	Director Economic Development & Planning	Franklin County
Matt Brown	Planning Administrator	Franklin County
Brad Fisher	Planner	Franklin County
Faz Riaz	Airline Station Manager	Frontier Airlines
Gib Harris	Chief of Maintenance	Nationwide Insurance Company
Kevin White	Airline Station Manager	Frontier Airlines
Mike Anderson	Development Director	Jefferson Township

Table G-1 Technical Advisory Committee (TAC) Membership, *(continued)*

Name	Title	Organization
Eric Bylaw	Director of Flight Operations	Lane Aviation Corporation
Chris Lottridge	Chief Pilot	Limited Brands
Dina Lopez	Strategic Projects Manager	Mid-Ohio Regional Planning Commission
Thea Walsh	Director of Transportation	Mid-Ohio Regional Planning Commission
Thomas Graham	Planner	Mid-Ohio Regional Planning Commission
Paige Kroner	Northeast Regional Representative	National Business Aviation Association
Brittany Davies	Northeast Regional Representative	National Business Aviation Association
Dan Wolfe	Manager	Nationwide Insurance Company
Kenneth Trahan	Vice President, Repair Station Operations	NetJets
Matt Sturges	Government Affairs	NetJets
Artie Clark	Flight Operations Compliance Manager	NetJets
Eric Lange	Manager	NetJets
Carl Lee	Member	North Central Area Commission
Tiffany White	Chair	North Central Area Commission
Wallace McLean	Member	North Central Area Commission
Kenneth Van Pelt	Community Relations Officer	Northeast Area Commission
Elwood Rayford	Chair	Northeast Area Commission
James Bryant	Administrator	ODOT Office of Aviation
Jeff Lischak	Airline Station Manager	Republic Airways
Jeff Talbert	General Manager	Signature Flight Support
Tim Cavanagh	Airline Station Manager	Southwest Airlines
Andrew Brasil	Airline Station Manager	Spirit Airlines
Yacobe Lemma	Airline Station Manager	Spirit Airlines
Ken Waite	Facility Manager	The Columbus International Air Center
Stephanie Morgan	Executive Director of the Air Transportation and Aerospace Campus	The Ohio State University Air Transportation/Aerospace Campus
Brian Kennedy	Airline Station Manager	United Airlines
LaThya Washington	Airline Station Manager	United Airlines
Vinnie Pestrichella	Airline Station Manager	United Airlines

TAC Meeting #1 – December 11, 2019
Emergency Operations Center, John Glenn Columbus International Airport
2:00 p.m. to 4:00 p.m.

TAC Meeting #2 – April 8, 2020
Conducted via Online Video Conference
10:00 a.m. to 12:00 p.m.

TAC Meeting #3 – September 2, 2020
Conducted via Online Video Conference
1:00 p.m. to 3:00 p.m.

TAC Meeting #4 – July 29, 2021
Conducted via Online Video Conference
3:00 p.m. to 4:00 p.m.

G.2 Public Information Meetings

Public Information Meetings were conducted to provide the public with opportunity to obtain information about the study process, to review the draft noise contour maps, flight track maps, and other study analysis. Due to the public health requirements to prevent the spread of COVID-19, in lieu of the first public meeting, information was posted online and comments could be submitted via email.

The second Public Information Meeting was conducted online via video conferencing software. The online meeting consisted of a live presentation by the Study Team followed by a questions and answer session in which attendees could submit questions in writing using the webinar chat function. Questions were answered using the chat function or responses were given aloud by a member of the Study Team during the live session for all attendees to see or hear the responses.

A third public meeting was held following publication of the Draft Part 150 Noise Compatibility Update Study document. This third Public Information meeting was held concurrently with a Public Hearing as described in Section G.3.

Information regarding these Public Information Meetings is provided below. Copies of presentations, newspaper notices, and comments received are included in the pages following this section of this appendix.

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

Meeting was cancelled and all information was posted online

Public Information Meeting #2 – September 2, 2020

Meeting was conducted via online webinar with question and answer session

Public Information Meeting #3 – July 29, 2021

Public Information Meeting #3 was held virtually. It was conducted concurrently with a public hearing as described in Section G.3.

G.3 Public Hearing

This Section describes both of the Public Hearings held on July 29, 2021 and the Public Hearing scheduled for January 30, 2025.

Public Hearing – July 29, 2021

A duly advertised public hearing was held concurrently with the third Public Information Meeting on July 29, 2021. The Public Hearing provided an opportunity for public comment on the Draft Part 150 Noise Exposure Maps (NEMs) and Noise Compatibility Program (NCP) Update as specified in 14 CFR 150.23(e)(7). The Public Hearing was conducted in an online format. Interested citizens could attend the online meeting via weblink or dial-in telephone number and to testify or provide written comments through the meeting platform's chat feature. A transcriptionist was online to record oral comments during the public hearing. Comments were

accepted online and via U.S. Mail. A transcript of the oral testimony and the written comments received at the Public Hearing is included in the Final Part 150 Noise Compatibility Update Study document.

Public notices were published in the Columbus Dispatch, La Mega Nota, Minority Communicator, and This Week Community News (Bexley, Rocky Fork, and Whitehall). Copies of the newspaper notices are included in this appendix. Notices were also posted to social media outlets.

Public Hearing – January 30, 2025

Because the forecast of aviation activity and noise exposure contours for this Study were revised since the Public Hearing held on July 29, 2021, a second Public Information Meeting and Public Hearing was held. The Public Hearing provided an opportunity for public comment on the Draft Part 150 Noise Exposure Maps (NEMs) and Noise Compatibility Program (NCP) Update as specified in 14 CFR 150.23(e)(7). The Public Hearing was conducted in an open house style format in which information was available for review on display boards and Airport and consultants were available to answer questions. Interested citizens could provide verbal or written comments at the meeting. A transcriptionist was available to record oral comments during the public hearing. Comments were also accepted online, via email, and via U.S. Mail through February 14, 2025. A transcript of the oral testimony and the written comments received during the comment period are included in this appendix.

Public notices announcing the availability of the Draft Part 150 Noise Exposure Maps (NEMs) and Noise Compatibility Program (NCP) Update Document and the date of the Public Information Meeting / Public Workshop were published in the Columbus Dispatch and the La Mega Nota online journal. Copies of the newspaper notices are included in this appendix. Notices were also posted to social media outlets.

G.4 Availability of the Document for Public Review

Copies of the Draft Part 150 Noise Compatibility Update Study document were made available for public review at the locations listed below and newspaper notices were published announcing the availability of the document for review and comment prior to the Public Hearings in July 2021 and in January 2025.

Locations for Draft Part 150 Document Review	
Columbus Regional Airport Authority John Glenn Columbus International Airport Administrative Offices 4600 International Gateway Columbus, OH 43219	Columbus Metropolitan Library Reynoldsburg Branch 1402 Brice Road Reynoldsburg, OH 43068
Columbus Metropolitan Branch Main Branch 96 South Grant Avenue Columbus, OH 43215	Columbus Metropolitan Library Shepard Branch 850 North Nelson Road Columbus, OH 43219
Columbus Metropolitan Library Gahanna Branch 310 Granville Street Gahanna, OH 43230	Columbus Metropolitan Library Whitehall Branch 4445 East Broad Street Columbus, OH 43213
Columbus Metropolitan Library Linden Branch 1990 Jefferson Avenue Columbus, OH 43211	Bexley Public Library 2411 East Main Street Columbus, OH 43209
Columbus Metropolitan Library Martin Luther King Branch 1467 East Long Street Columbus, OH 43203	Part 150 Study Website: www.airportprojects.net/cmh-part150/home/documents-reports/

Technical Advisory Committee (TAC) Meeting #1
December 11, 2019

Invitation Letters

Meeting Registration

Presentation

Meeting Summary

This page intentionally left blank

COLUMBUS
REGIONAL AIRPORT AUTHORITY

Board of Directors

William R. Heifner
Chair

Jordan A. Miller, Jr.
Vice Chair

Dr. Frederic Bertley, Ph.D.
Don M. Casto, III
Paul Chodak, III
Elizabeth P. Kessler, Esq.
Karen Morrison
Susan Tomasky
Terrance Williams

Joseph R. Nardone
President & CEO

November 6, 2019

Name
Title
Organization
Address
CSZ

RE: John Glenn Columbus International Airport Part 150 Noise Compatibility Update Study Technical Advisory Committee Meeting

Dear Stakeholder,

This letter is to inform you that the Columbus Regional Airport Authority (CRAA) is updating the Part 150 Noise Compatibility Study for the John Glenn Columbus International Airport (CMH). The purpose of a Part 150 Study is to identify aircraft noise impacts through the creation of Noise Exposure Maps (NEMs); and, if necessary, to develop mitigation measures to help minimize noise impacts on the surrounding community. In support of the Part 150 Study update, a Technical Advisory Committee (TAC) is being formed to provide input and comments throughout the study process. On behalf of the CRAA, I would like to invite you to participate as a member of the TAC to provide input into the Part 150 Study. The first TAC meeting is scheduled for the following time and location:

Date:	Wednesday, December 11, 2019
Time:	2:00 p.m. to 4:00 p.m.
Location:	John Glenn Columbus International Airport Emergency Operations Center

The Emergency Operations Center can be accessed by an elevator located adjacent to the food court on the ticketing level of the passenger terminal. There will be signage near this elevator directing you to the meeting location. Please park in the Short-Term Parking Garage and bring your parking ticket to the meeting with you for validation. If the short term garage is full, additional parking is available in the Blue Lot or the Walking Lot.

At this meeting we will discuss the Part 150 Noise Compatibility Process and the role of the TAC. A copy of the meeting agenda is enclosed.

Your participation in this study would be greatly appreciated. Please let us know if you are able to attend the December 11th meeting by responding to Ms. Marie Keister at (614) 565-2819 or mkeister@engagepublicaffairs.com by December 2nd. If you have any questions about this study, please do not hesitate to contact Mr. David Wall at (614) 239-4063 or dwall@columbusairports.com.

Sincerely,

Tom McCarthy
Chief Planning & Engineering Officer
Columbus Regional Airport Authority

Technical Advisory Committee Invite List - December 11, 2019

Name	Title	Organization
Voda Layne	Airline Station Manager	Air Canada Express
Andrew Cooper	Representative	Airline Pilots Association
Paul McGraw	Vice President, Operations and Safety	Airlines for America
Laura Rinaldi McKee	Vice President, Airport Affairs	Airlines for America
Sherriale Fleming	Airline Station Manager	Alaska Airlines
Robert Walters	Airline Station Manager	American Airlines
Mike Filucci	Vice President, Pilot Information Center, Flight Operations, and Member Services	AOPA - Airports Division
Shelia Tillman	Member	Brittany Hills Civic Association
Ben Kessler	Mayor & Director of Development	City of Bexley
Mark Dravillas	Planning Administrator	City of Columbus
Talisa Dixon	Superintendent	City of Columbus Schools
Anthony Jones	Director of Planning & Development	City of Gahanna
Andrew Bowsher	Development Director	City of Reynoldsburg
Zach Woodruff	Director of Economic Development & Public Service	City of Whitehall Planning Commission
Mark Kelby	Airport Planner	Columbus Regional Airport Authority
Justin Anderson	Deputy Project Manager	Columbus Regional Airport Authority
Tom McCarthy	Chief of Planning and Engineering	Columbus Regional Airport Authority
Luke Curtis	Operations Supervisor	Columbus Regional Airport Authority
Todd Carter	Sr. Manager, Business Development & Customer Experience	Columbus Regional Airport Authority
Kristen Easterday	Director of Communications and Public Affairs	Columbus Regional Airport Authority
Casey Denny	Chief Operations Officer	Columbus Regional Airport Authority
Karen Richardson-Rogers	President	Cumberland Ridge Civic Association
Faiz Syed	Airline Station Manager	Delta Airlines
Michael Johnson	President	East Columbus Civic Association
Barry Payne	Manager	FAA CMH ATCT
Dave Neff	Manager	FAA CMH ATCT
Katherine Delaney	Community Planner	Federal Aviation Administration - Detroit Airports District Office
James Schimmer	Director Economic Development & Planning	Franklin County
Matt Brown	Planning Administrator	Franklin County
Kevin White	Airline Station Manager	Frontier Airlines
Jeff Palm	Township Administrator	Jefferson Twp.
Robert Adams	Principal	Landrum and Brown
Chris Sandfoss	Environmental Project Manager	Landrum and Brown
Eric Bylaw	Director of Flight Operations	Lane Aviation Corporation
Mike Wilkinson	Director of Flight Operations	Limited Brands
Thea Walsh	Director of Transportation	Mid-Ohio Regional Planning Commission
Dan Wolfe	Manager	Nationwide Insurance Company
Alan Bobo	EVP, Flight Operations	NetJets
Tiffany White	Chair	North Central Area Commission
Elwood Rayford	Chair	Northeast Area Commission
James Bryant	Aviation Administrator	Ohio Office of Aviation
Jeff Lischak	Airline Station Manager	Republic Airways
Jeff Talbert	General Manager	Signature Flight Support
Tim Cavanagh	Airline Station Manager	Southwest Airlines
Andrew Brasil	Airline Station Manager	Spirit Airlines
Ken Waite	Facility Manager	The Columbus International Air Center
Stephanie Morgan	Executive Director	The Ohio State University Air Transportation and Aerospace Campus
LaThya Washington	Airline Station Manager	United Airlines
Brian Kennedy	Airline Station Manager	United Airlines

CRAA - CMH Part 150 Noise Study

Technical Advisory Committee (TAC) Meeting #1

Wednesday, December 11, 2019 | 2:00 p.m.

JOHN GLENN INTERNATIONAL

SIGN-IN SHEET | PLEASE PRINT

	NAME	ORGANIZATION
1	Stephanie Morgan	"The" Ohio State
2	Kyle Lewis	AOPA
3	Eric Lange	Net Jets
4	Addie Clark	NetJets
5	[illegible]	ODOT
6	Gib Harris	Nationwide
7	Luke Curtis	CRAA
8	Benjamin Kirtley	CRAA
9	Casey Denny	CRAA
10	Mark Kelby	CRAA
11	Wallace O McLean	NCAC
12	Chris Lottridge	Lbrands
13	Duffy Cooper	ALPA
14	Dilli Dhital	American Airlines.
15	Connie Tracy	CRAA
16	Michael Blackford	Bahanna

CRAA - CMH Part 150 Noise Study

Technical Advisory Committee (TAC) Meeting #1

Wednesday, December 11, 2019 | 2:00 p.m.

JOHN GLENN INTERNATIONAL

SIGN-IN SHEET | PLEASE PRINT

	NAME	ORGANIZATION
17	Betsy Taylor	CRAA
18	Thomas Graham	MORPC
19	Kevin White	Trego-Bryan
20	Tim Cavanagh	SWA
21	Ben Kessler	Bexley
22	Tom McCarthy	CRAA
23	Kristin Easterday	CRAA
24	Kenneth VanSelt	NE Commissioner
25	Barry Payne	FAA CMH ATCT
26	Tony Celebrezze	City Columbus
27		
28		
29		
30		
31		
32		

Part 150 Noise Compatibility Study

Technical Advisory Committee Meeting #1
December 11, 2019

JOHN GLENN INTERNATIONAL

1

Agenda

- Welcome and Introductions
- Part 150 Noise Compatibility Study Process
- Role of the Technical Advisory Committee
- History of Noise Compatibility Planning
- Existing Data Collection
- Types of Noise Compatibility Program Measures
- Schedule and Next Steps
- Group Discussion

2

Part 150 Noise Compatibility Study Process

Overview

- Code of Federal Regulations (14 CFR) Part 150
  - Established requirements for airport owners who choose to submit noise exposure maps and develop noise compatibility planning programs for FAA review and approval
  - Part 150 Studies undertake an in depth and public oriented approach to noise and compatible land use
- Part 150 Studies Are Planning Studies
  - Identify noise and land use impacts that exist today and in the future
  - Work to develop solutions within the FAA's framework
- Part 150 Studies can open funding sources
  - Following 14 CFR Part 150 guidelines makes airport eligible to apply for grants for implementing recommendations of the study
  - Funding is subject to availability and not guaranteed

3

Part 150 Noise Compatibility Study Process

Overview

- Part 150 Studies do not:
  - Recommend closing an airport or implementing mandatory restrictions on aircraft
  - Give environmental approval for implementing noise abatement or land use programs

4

Part 150 Noise Compatibility Study Process

Essential Elements of a Part 150 Study

- Noise Exposure Maps:
  - Description of the noise levels for existing and future (+5 years) conditions
  - Future condition should take into account any changes (physical or operational) that may have an effect on the noise levels around the airport
    - Examples of physical changes may include: runway threshold relocation, changes in terminal/gate layout, new aircraft parking facilities
    - Examples of operational changes may include: changes in aircraft operating levels, and fleet mix, new flight tracks, new destinations
- Noise Compatibility Program:
  - Recommendations for reducing, minimizing, and/or mitigating aircraft noise and land use conflicts
    - Noise Abatement
    - Land Use Mitigation
    - Implementation Measures

JOHN GLENN INTERNATIONAL

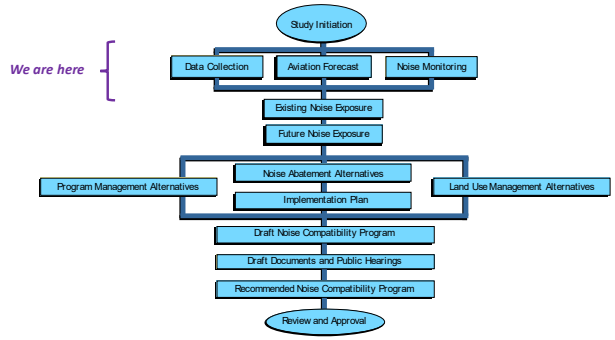
Part 150 Noise Compatibility Study Process

Essential Elements of a Part 150 Study

- Public Involvement:
  - Technical Advisory Committee – Group of stakeholders affected by, or having oversight responsibilities for, issues covered by the Part 150 Study Update
    - Airport Authority officials
    - Aircraft operators
    - Government Officials / Land Use Planners
    - Community Groups
    - Air Traffic Controllers
  - Public Workshops - Open house, informational meetings to discuss and gather comments on potential aviation noise, land use, and other mitigation measures
  - Public Hearings - to receive comments (either oral or written) from the public on the Draft Part 150 Study Update document
  - Project Website / Social Media
    - Project website and social media will be updated with study information, including images and documents pertinent to the study
    - Posting of all meeting notices
    - Posting of study process and draft findings

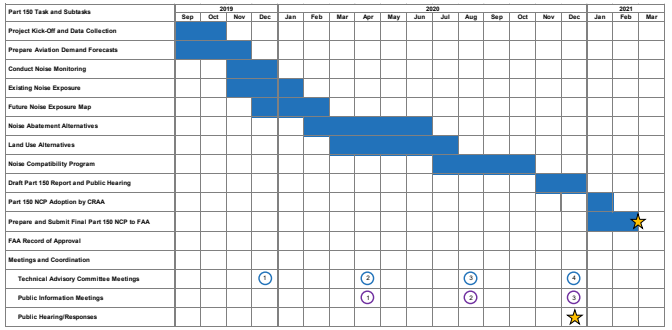
JOHN GLENN INTERNATIONAL

Part 150 Noise Compatibility Study Process



JOHN GLENN INTERNATIONAL

Part 150 Noise Compatibility Study Process



JOHN GLENN INTERNATIONAL

Technical Advisory Committee

- Role of the Technical Advisory Committee (TAC)
  - Sounding Board
  - Link to the Community
  - Technical Review
  - Aid to Implementation
- TAC Meeting Schedule
  - Meeting #1 – December 2019
  - Meeting #2 – Spring 2020
    - Review preliminary noise exposure maps, forecast, and results of noise measurement program
  - Meeting #3 – Summer/Fall 2020
    - Analysis of noise abatement measures
  - Meeting #4 – Winter 2020
    - Review Draft Noise Compatibility Program

JOHN GLENN INTERNATIONAL 9

9

History of Noise Compatibility Planning

Federal Regulations and Guidelines

- Jet Age + Rapid Expansion of Airports + Continued Suburban Development/Sprawl = Adverse Noise Impacts
- Aviation Noise Abatement Policy of 1976
- Aviation Safety and Noise Abatement Act of 1979
  - 14 CFR Part 150 (1981) established requirements for airport owners who choose to submit noise exposure maps and develop noise compatibility planning programs to the FAA for review and approval.
  - Typically voluntary on the part of the sponsor and is not an automatic requirement of the Federal government.
- Airport Noise and Capacity Act of 1990
  - Established phase-out timeline of Stage 2 aircraft (Commercial aircraft >75,000 lbs.)
  - Restricted airports from imposing locally based, non-voluntary restrictions without first completing a Part 161 Study. (To date no Part 161 restrictions request has been submitted and fully approved by the FAA)
- FAA Final Policy on Part 150 Noise Mitigation Measures (Oct 1, 1998)
  - New homes constructed within an FAA-approved and published noise exposure contour are NOT eligible for remedial noise mitigation.

JOHN GLENN INTERNATIONAL 10

10

History of Noise Compatibility Planning

Previous Part 150 Studies Completed at CMH

- 1987 Part 150 Study (original)
- 1993 Part 150 Study Update
- 1999 Part 150 Study Update
  - 5 Noise Abatement Measure Recommendations
  - 11 Land Use Management Recommendations
  - 6 Implementation Management Recommendations
- 2001 Noise Exposure Map Update
  - Updated Noise Contours to 2001/2006 conditions
  - Extended the Sound Insulation Program boundary
- 2007 Part 150 Study Update (FAA Record of Approval in 2008)
  - Concurrent with EIS for relocation of the south runway
  - Extended the Sound Insulation Program boundary and reviewed other noise abatement measures
  - Proposed the "Airport Land Use Management District" fixed boundary for land use compatibility planning

JOHN GLENN INTERNATIONAL 11

11

History of Noise Compatibility Planning

Current Part 150 Study Update

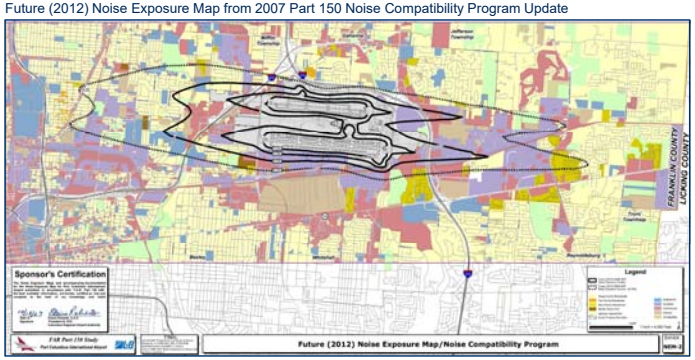
- Continuation of CRAA's commitment to proactive noise compatibility planning and goal to be a "Good Neighbor" to the surrounding community
- Commitment of the 2009 Environmental Impact Statement and Record of Decision for the relocation of the south runway at CMH
  - Relocated runway opened in August 2013
  - Delayed start of Part 150 while north runway underwent rehabilitation in 2016

JOHN GLENN INTERNATIONAL 12

12

History of Noise Compatibility Planning

Future (2012) Noise Exposure Map from 2007 Part 150 Noise Compatibility Program Update



JOHN GLENN INTERNATIONAL

13

13

History of Noise Compatibility Planning

Current Part 150 Study Update

- Residential Sound Insulation
  - CRAA has provided sound insulation to nearly 800 homes
- Acquisition Program
  - Acquisition of 35 homes impacted by relocation of the south runway
  - Provided relocation assistance to affected residents
- Tracking and Measuring Noise
  - Operates WebTrack System with 16 permanent noise monitors
  - Allows staff and the general public the ability to track flight activity and noise levels
- Noise Complaint & Inquiries
  - Dedicated staff to respond to complaints and inquiries about aircraft operations and noise
- Proactive planning
  - Adhere to both federal and local regulations
  - Maintain transparent communication
  - Provide information to land use planners, developers, and the general public

JOHN GLENN INTERNATIONAL

14

14

Existing Data Collection

Technical Requirements

- Represents an annual-average day (1 year of operations/365 days).
- Described with a set of continuous lines that represent equal levels of noise.
- Prepared using the FAA's Airport Environmental Design Tool (AEDT) Version 3b
- Must use specific noise metric: Day-Night Average Sound Level (DNL)
  - DNL represents 24-hour average noise level
  - Penalty for nighttime (10:00 p.m. - 6:59 a.m.) flights (x 10)
  - National standard for all Federal agencies
  - 65 DNL identified as threshold for impact to noise sensitive land uses

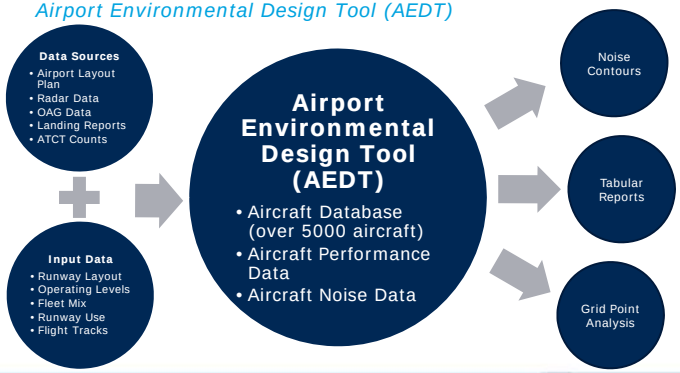
JOHN GLENN INTERNATIONAL

15

15

Existing Data Collection

Airport Environmental Design Tool (AEDT)



JOHN GLENN INTERNATIONAL

16

16

Existing Data Collection

Runway Layout

17

Existing Data Collection

Operating Levels

- Existing 2018/19 Operations
  - Actual based on FAA Air Traffic Control Tower records for September 2018 through August 2019

Aircraft Category	2018 Existing Operations		
	Actual	Average Annual Day	Percent
Air Carrier & Commuter	113,961	312	84.4%
General Aviation	20,294	56	15.0%
Military	744	2	0.6%
Total	134,999	370	100.0%

18

Existing Data Collection

Operating Levels

- Forecasted 2025 Operations
  - Based on aviation activity forecast prepared for this Part 150 Study

Aircraft Category	2025 Forecast Operations		
	Forecast	Average Annual Day	Percent
Air Carrier & Commuter	128,580	352	85.6%
General Aviation	20,930	57	13.9%
Military	630	2	0.4%
Total	150,140	411	100.0%

19

Existing Data Collection

Fleet Mix

- Types of aircraft that operate at the airport
- Input Data Based on most recent 12 months of data from the following sources:
  - Airport Landing Reports
  - Official Airline Guide
  - Radar Data
- Air Carrier operations primarily made of:
  - Airbus 319 / 320 / 321
  - Boeing 737-700 / 737-800
  - Embraer E170 / 175
  - Bombardier CRJ-700 and CRJ-900
- Air Taxi/General Aviation operations include business jets, turboprops, and piston engine propeller aircraft

20

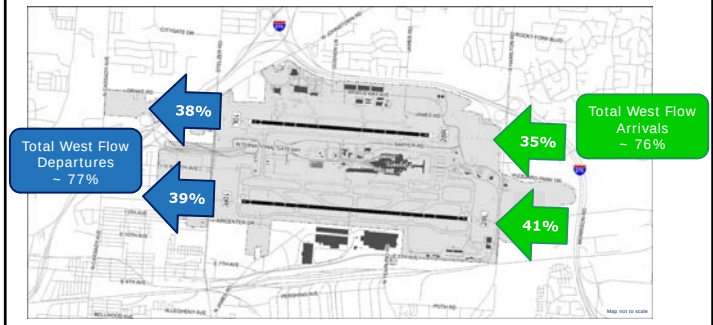
Existing Data Collection

Runway Use

- West Flow (arrive and depart Runways 28L and 28R)
  - Historically: approximately 75% of the operations
- East Flow (arrive and depart Runways 10L and 10R)
  - Historically: approximately 25% of the operations
- Runway Direction is dictated by wind, weather, and other operational factors
- South runway (10R/28L) is longer and used slightly more often
- Input data based on the most recent 12 months of available flight tracking data

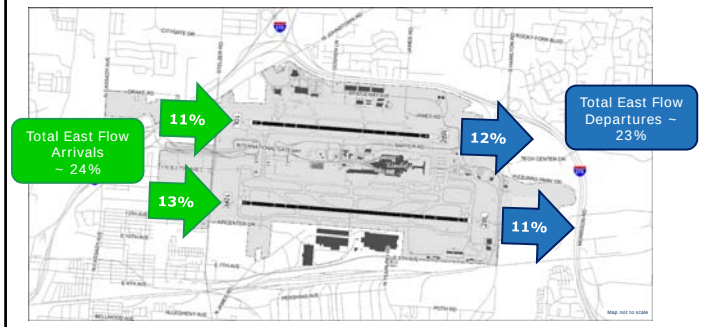
Existing Data Collection

Runway Use – West Flow



Existing Data Collection

Runway Use – East Flow



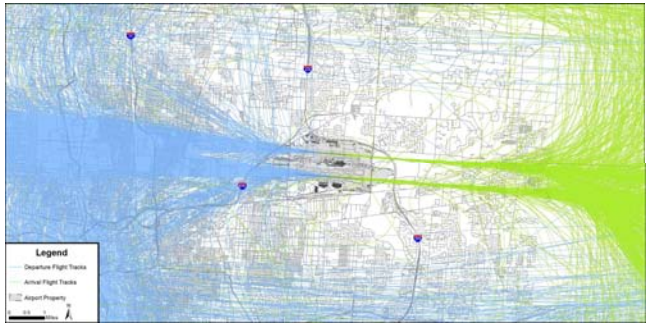
Existing Data Collection

Flight Tracks

- Flight tracks are lines that represent the ground path of an aircraft as it arrives or departs the airport
- AEDT applies a 3-dimensional profile to each track that includes altitude, speed, thrust, and flap settings to calculate aircraft noise along each flight route
- Radar data was collected from the Airport's Flight Tracking System representing each season
- Representative tracks were created in the AEDT to model operations

Existing Data Collection

West Flow Flight Tracks

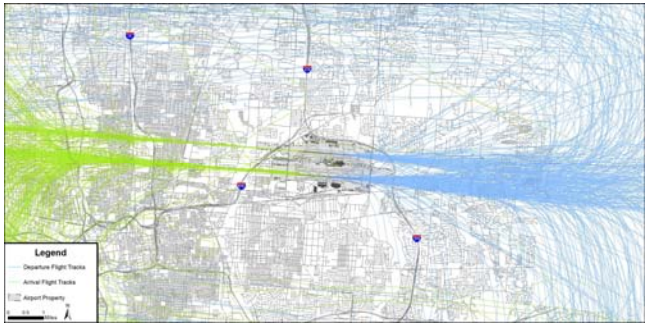


JOHN GLENN INTERNATIONAL

25

Existing Data Collection

East Flow Flight Tracks



JOHN GLENN INTERNATIONAL

26

Existing Data Collection

Noise Monitoring Program

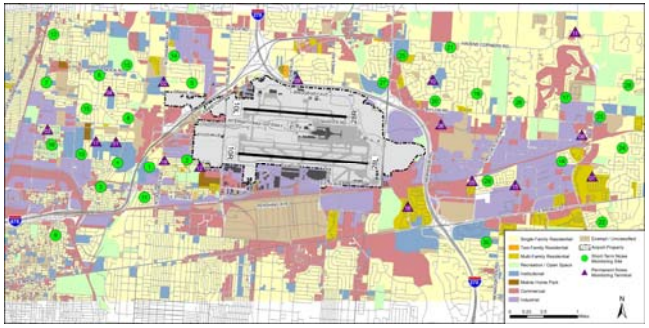
- Purpose
  - Validate/verify the input data in the AEDT (focus on departures)
  - Obtain "real-life" noise measurements to assist in understanding the total noise environment
- Conducted the week of November 11, 2019
- Collected noise readings at 30 sites (approx. 1 hour at each site)
  - Sites selected to provide wide coverage within residential areas and areas of noise complaints
  - Three person team
  - Used ANSI Type 1 Sound Level Meters
- Preliminary Results
  - Loudest aircraft recorded was an Embraer ERJ-175
  - Average number of aircraft observed at each site was 11 to 12
- Next Steps
  - Further analysis to be completed
  - Incorporate data from permanent noise monitors
  - Compare to AEDT noise database
  - Final results to be presented at next TAC meeting

JOHN GLENN INTERNATIONAL

27

Existing Data Collection

Noise Monitoring Program



JOHN GLENN INTERNATIONAL

28

Types of Noise Compatibility Measures

Noise Abatement Measures

- Measures to control noise at the source (i.e. aircraft)
- Examples
  - Flight location (e.g., departure flight corridors)
  - Runway use program (e.g., how often runway ends are used)
  - Ground activity restrictions (e.g., run-up locations/time)
  - Facility modifications (e.g., runway extensions, berms)
  - Flight management (e.g., mandatory curfews / restrictions -- would require Part 161 Study)

JOHN GLENN INTERNATIONAL 29

29

Types of Noise Compatibility Measures

Land Use Measures

- Preventive strategies
  - Prevent the introduction of additional noise-sensitive land uses within existing and future noise exposure contours
  - May also be applicable outside of the 65 DNL noise contour
  - Examples:
    - Zoning Codes
    - Subdivision Regulations
    - Airport Environs Overlay Zone
- Corrective strategies
  - Mitigate existing and projected future unavoidable noise impacts in areas of existing incompatible land use
  - Applicable to 65+ DNL noise contour
  - Examples
    - Property acquisition
    - Sound Insulation
    - Avigation Easements

JOHN GLENN INTERNATIONAL 30

30

Types of Noise Compatibility Measures

Implementation Measures

- Measures designed to assist with the implementation and management of the Noise Compatibility Program (NCP)
  - Examples:
    - Noise Program Office and Staff Support
    - Flight tracking / Noise Monitoring System
    - Focus Groups / Roundtables
    - Periodic Review / Update to the Program

JOHN GLENN INTERNATIONAL 31

31

Next Steps

- Complete review of Noise Measurement Data
- Submit Aviation Activity Forecast to FAA for Review & Approval
- Prepare the Existing and Future Noise Exposure Contours
- Identify Preliminary Noise Abatement, Land Use Management, and Implementation Alternatives
  - Analysis and discussion of potential alternatives
- Next TAC Meeting – Spring 2020

JOHN GLENN INTERNATIONAL 32

32

Group Discussion

Question #1:

- What issues / concerns do you have related to airport noise compatibility?

JOHN GLENN INTERNATIONAL 33

33

Group Discussion

Question #2:

The TAC includes representatives from airport users, planning and zoning officials, and area neighborhoods. Is there anyone else you would recommend be included? If so, who?

JOHN GLENN INTERNATIONAL 34

34

Group Discussion

Question #3:

Does your organization have any data that might be helpful to this study – e.g. growth projections, proposed developments in the area? If so, what?

JOHN GLENN INTERNATIONAL 35

35

Group Discussion

Question #4:

How can you help get the word out when we are ready to promote public meetings?

JOHN GLENN INTERNATIONAL 36

36

Group Discussion

Other Questions or Comments to aid this process

John Glenn Columbus International Airport
Part 150 Noise Compatibility Update Study

Technical Advisory Committee Meeting 1

Date: Wednesday, December 11, 2019
Time: 2:00-4:00 P.M.
Location: John Glenn Columbus International Airport
Emergency Operations Center
4600 International Gateway, Columbus, OH 43219

Meeting Summary

Meeting Purpose

- To review:
  - The Part 150 Noise Compatibility Study process
  - Role of the Technical Advisory Committee
  - History of noise planning at the airport
  - Existing data, alternative, schedule and next steps
- To gather input and ask questions about the study

Welcome and Introductions

Justin Anderson, Columbus Regional Airport Authority (CRAA) Project Manager, welcomed everyone to the Technical Advisory Committee (TAC) meeting and thanked them for participating. He mentioned that one of CRAA's goals is to be a great neighbor to the Airport's surrounding communities, residents and businesses. He hopes that by holding these TAC meetings, this goal is further fulfilled, through being open and honest with the Airport's neighbors and partners with the information and process of the noise study.

Rob Adams, L&B Principal-in-Change, introduced himself and then asked for everyone in the room to introduce themselves. Rob acknowledged the diverse perspectives and different voices in the room, stating this is how we'll work together to uncover and solve any issues that may arise during the Part 150 Noise Compatibility Study.

Part 150 Noise Compatibility Study

Rob gave an overview of federal regulations, requirements and process of the Part 150 Noise Compatibility Study – discussing what a Part 150 Study is and is not. A Part 150 is similar to a master planning process in that it starts with looking at existing conditions, forecasts for the future, and then planning for the future. In this case, we are focused specifically on noise compatibility. By following federal guidelines, airports are able to apply for grants to implement study recommendations. Part 150 studies do not recommend closing an airport or implementing mandatory restrictions on aircraft or give environmental approval for implementing noise abatement or land use programs. The three main elements of a Part 150 Study include:

1. ***Noise Exposure Maps*** – represents noise levels around the airport and includes an existing conditions map and a map forecasting future noise contours five years in the future. There are very specific Federal Aviation Administration (FAA) criteria the study must follow.
2. ***Noise Compatibility Program*** – this is a group of recommendations, which can include noise abatement measures (what can be done at the source), land use measures (e.g. sound insulation) and implementation measures (designed to assist the program implementation – e.g. noise monitoring systems, noise complaint system, etc.). These might be eligible for FAA funding.
3. ***Public Involvement*** – Includes TAC meetings, public meetings with open house format, public hearings, project website and social media (outreach campaign).

Rob then provided an overview of the study process and schedule, discussing the steps from study initiation to review and approval. He also noted the schedule includes four TAC meetings, two public information meetings and one public information meeting/public hearing.

Role of the Technical Advisory Committee

Rob briefly discussed the role of the TAC and during this discussion he reiterated that the project team would like the TAC to serve as a sounding board. The TAC is a link to the community, which provides technical input and review and helps implement the program. Four TAC meetings will be held over the course of the study.

History of Noise Compatibility Planning

Chris Sandfoss, L&B Project Manager, provided a history of noise compatibility planning nationally and locally at CMH. The first Part 150 study at the Airport was in 1987, while the most recent was completed in 2007 concurrently with an Environmental Impact Statement for relocating the south runway. The 2007 study recommended expanding the sound insulation program boundary and proposed an Airport Land Use Management District for noise compatibility planning. The south runway was relocated and opened in August 2013. The north runway was rehabilitated in 2016. FAA asked CRAA not to conduct another Part 150 study until those two projects were completed.

This study is a continuation of CRAA's commitment to be a good neighbor and proactively plan for the future. While the last Part 150 was completed in 2007, it included a Future 2012 Noise Exposure Map, which Chris shared.

Chris explained that DNL stands for average Day-Night Average Noise Level. This metric reflects the average level of noise over 24-hours. Nighttime events (between 10:00 pm and 6:59 a.m.) have a penalty applied of 10 decibels. The noise model mathematically averages out the noise over 24 hours. In addition to the DNL metric, we are able to display maps that shows maximum levels and time above levels (such as how many hours a day an area has above 65 decibels over 24-hours), which is a little easier for some people to understand.

Over the years, CRAA has provided sound insulation to nearly 800 homes through Part 150 programs and acquired 35 homes impacted by the south runway relocation. CRAA operates a WebTrack System with 16 permanent noise monitors, allowing staff and the public the ability to track flight activity and noise levels. CMH has staff to respond to complaints and inquiries about aircraft operations and noise. A noise hotline is utilized to collect noise complaints.

Existing Data Collection

Chris reviewed the data collection to date, stated the technical requirements for the study and discussed the Airport Environmental Design Tool (AEDT). The AEDT is a computer model which lets the team input a plethora of data and data sources into a model that provides future noise contours, tabular data and analysis. He also explained the type of data that this study will collect, which includes flight operations, fleet mix, and runway use. The FAA Air Traffic Control Tower provides the team additional information on existing operations.

During this discussion several TAC members had questions relating to the data being collected for the study:

Tony Celebreeze (City of Columbus) asked if other factors than weather affect flight operations and direction of land use? Chris Sandfoss (L&B) and Barry Payne (FAA): Runway direction is dictated primarily by weather – mostly wind.

Barry Payne (FAA) asked if the Part 150 accounts for magnetic variation. Will you allow for that? Five years from now the magnetic headings will change slighty. Will your noise study account for that? Chris Sandfoss (L&B): if there is a change in flight path or waypoints. Rob Adams (L&B): a couple of years ago here at CMH, we looked at that to see what the change was. There wasn't a real notable change, but we have seen that at other airports, particularly to the south. At Ft. Lauderdale it was a full five-degree difference, which also affected runway naming. Chris noted there is a difference between magnetic north and true north. It's less of an issue in the Midwest. Usually less than three or four degrees off from true north. It's more pronounced on the coasts. The magnetic field does change over time. It's not as big of an issue here.

Duffy Cooper (ALPA) asked if one end of the airport is more sensitive to noise concerns over the other? Chris Sandfoss (L&B): more residential properties are to the west, so that area is more sensitive than to the east of the airport. The east and west ends get the bulk of the noise because arrivals and departures come from east and west.

Barry Payne (FAA): Looking at the noise contour, how can I differentiate the penalty for nighttime? Is there any difference in the noise contour at all? Chris Sandfoss (L&B): without the penalty for nighttime operations that we've already account for here, the contour would be smaller. We don't have a map that shows that. We'd have to look at night operations to determine that. We could demonstrate what that increase would be.

Jim Bryant (ODOT): do you collect any data that shows the when the/where the maximum exposure is? Chris Sandfoss (L&B): yes, we published that in the 2007 document. We had a map and table that showed what the noise levels were – from maximum and actual DNL level, including the time above the 65 and 85 Decibels. Jim asked if you can show the impacts of the maximum DBL. Rob Adams (L&B): we have compared OSHA standards to the noise exposures. We look at the noise exposure levels and during certain times. None of those would extend off the airport area.

Kyle Lewis (AOPA): Regarding fleet mix, what is the largest aircraft? Justin Anderson (CRAA) said we've had 757s, 767s are the largest and MD80s and MD90's are the loudest, but industry is retiring them. Even larger aircraft are quieter now. Tom McCarthy (CRAA) noted they are usually not as loud as military jets. Kyle: is there a difference between jet noise, piston engine and turbo prop noise considered? Chris Sandfoss (L&B): yes, the noise model has the noise generated by the various types of aircraft. The model has the ability to account for those different engine types.

Casey Denny (CRAA): On the fleet mix, you collect how many aircraft operate here with those types of engines, and then your model pulls the specific info on what noise is generated. Will we get to see that? Chris Sandfoss (L&B): Yes. The 2007 Part 150 goes into detail on this methodology and is available on the website if you are interested and the same level of detail will be provided for this Study.

Chris also discussed how flight tracks are modeled for noise impacts too. The maps showed how most of the operations operate to the west (about 75 percent of all operations). Chris then explained noise monitoring was also conducted via portable noise monitors in 30 locations for approximately one hour at each location. While the model has a database of aircraft, the team will compare the real data collected onsite to the modeled data as a way to validate the model input. This was conducted during the week of November 11, 2019. The loudest aircraft recorded happened to be an Embraer ERJ-175. We observed around 11 or 12 operations per site, per hour. Final results will be presented to the TAC at an upcoming meeting.

Types of Noise Compatibility Program Measures

Chris then discussed noise abatement measures and shared that one goal for the study was to identify measures that should be retained or introduced to CMH. Land use measures, both preventive and corrective, could also be implemented. This is where local planners and zoning officials could provide information to inform this discussion. He noted the City of Columbus has an Overlay Zone which requires the city to notify future buyers of properties within the zone.

Next Steps

Chris then reviewed the next steps (shown below) before ending the meeting with a group discussion.

- Complete review of Noise Measurement Data
- Submit Aviation Activity Forecast to FAA for Review & Approval
- Prepare the Existing and Future Noise Exposure Contours
- Identify Preliminary Noise Abatement, Land Use Management, and Implementation
- Alternatives
- Analysis and discussion of potential alternatives
- Next TAC Meeting – Spring 2020

During this review of action items, TAC member Kyle Lewis (AOPA) asked: how many noise complaints do you receive a year? Luke Curtis (CRAA) said they've received approximately 150 complaints a year (including Rickenbacker and Bolton Field) with about 80 of them coming from one caller in 2019.

Kenneth Van Pelt (Northeast Area Commission) then asked for electronic copies of the presentation to share with others from their organization. Marie Keister (MurphyEpson) replied that we would send a PDF out to all members of the TAC.

Group Discussion

Marie Keister, Murphy Epson engagement lead, then facilitated an interactive discussion with TAC participants asking them to write down on Post-it Notes what issues or concerns they or

their constituents may have regarding noise compatibility. A list of themes which emerged from the discussion is listed below.

- Potential federal changes to DNL standards and guidance and impacts for nearby communities
- Impacts of noise to residential and non-residential uses
- Confusion between a Part 150 Study and a noise insulation program
- Will future forecasting of operations (additional carriers) be taken into consideration?
- Effects to airline operation disruptions over potential noise curfews and maintaining 24-hr access
- Impacts to pilots/aircraft safety if traffic patterns are changed
- New modes of air mobility (i.e. drone delivery, 'Uber' air buses etc.)
- Changes in nearby land use policies or zoning
- Is any specific data needed for a successful Part 150 plan? (i.e. land use or from airline operators)

These themes will assist the project team while they develop and implement the Part 150 Noise Compatibility Study.

Conclusion

As the end of the meeting drew near a few more questions and comments were given by TAC members and project team staff.

A discussion was held discussing a potential federal change to decibel level requirements from 65 to 60 DNL. A TAC member asked if a 60 DNL boundary would be shown on mapping for this study and the project team confirmed. This led to a conversation on the evaluation of noise contours and how additional a noise insulation study isn't guaranteed as an outcome of this study. A CRAA representative mentioned that most of the affected homes and residences have been fitted with noise cancelling doors and windows inside the required areas. In fact, 30-plus homes within the 65 DNL boundary were purchased during the last planning study and CMH.

A TAC member asked the team for the distance of the study area and a Chris replied the study area is approximately 4.5 miles east and west of the CMH and 1 mile north and south. The current 65 DNL is located within this study area.

Concerns were raised if recommendation were made that changed airspace take-off and landings which resulted in possible safety concerns for pilots? This could also affect noise levels for residences around CMH. Chris replied that the AEDT model would be able to take all this information and data into consideration as well as the ability to forecast five years into the future. It was mentioned that future FAA route changes would be published in September 2020. A TAC member asked if Future modes, like Uber Air, were being considered. Chris mentioned that they are not being considered because they currently don't exist and aren't included as an aircraft in the model. Though once they do exist their data, or a similar substitute aircraft would be added to the model.

Marie Keister asked if there were any planning or zoning representatives were in the room and two TAC members raised their hands. She asked Chris and Rob, if the team still needed any additional land use data or modeling. Chris replied no, but their expertise would be needed in reviewing the results and data collected for the study.

Justin Anderson closed the meeting and thanked everyone for attending. He also mentioned that the next TAC meeting would occur in April 2020 in which the group would be discussing forecasts and baseline data. He also asked if there were any other groups or organization not at the meeting that should be invited in the future as part of the TAC. None of the current TAC members raised any concern and the meeting was adjourned.

Meeting Participants

The following participants were in attendance at the meeting:

Duffy Cooper	Airline Pilots Association (ALPA)
Dilli Dhital	American Airlines
Kyle Lewis	Aircraft Owners and Pilots Association (AOPA)
Ben Kessler	City of Bexley
Tony Celebrezze	City of Columbus
Michael Blackford	City of Gahanna
Justin Anderson	Columbus Regional Airport Authority
Luke Curtis	Columbus Regional Airport Authority
Casey Denny	Columbus Regional Airport Authority
Kristen Easterday	Columbus Regional Airport Authority
Mark Kelby	Columbus Regional Airport Authority
Benjamin Kirtley	Columbus Regional Airport Authority
Tom McCarthy	Columbus Regional Airport Authority
Betsy Taylor	Columbus Regional Airport Authority
Connie Tracy	Columbus Regional Airport Authority
Barry Payne	FAA CMH ATCT
Kevin White	Frontier Airlines
Robert Adams	Landrum and Brown
Chris Sandfoss	Landrum and Brown
Chris Lottridge	Limited Brands
Thomas Graham	Mid-Ohio Regional Planning Commission
Gib Harris	Nationwide Insurance
Artie Clark	NetJets
Eric Lange	NetJets
Wallace McLean	North Central Area Commission
Kenneth Van Pelt	Northeast Area Commission
James Bryant	ODOT Office of Aviation
Tim Cavanagh	Southwest Airlines
Stephanie Morgan	The Ohio State University Air Transportation/Aerospace Campus
Marie Keister	Engage Public Affairs
Nick Hoffman	MurphyEpson Inc.

Technical Advisory Committee (TAC) Meeting #2
April 8, 2020

Invitation Letters

Presentation

Meeting Summary

This page intentionally left blank

Technical Advisory Committee Invite List - April 8, 2020

Name	Title	Organization
Voda Layne	Airline Station Manager	Air Canada Express
Kyle Lewis	Regional Manager, Government Affairs & Airport Advocacy, Great Lakes	Aircraft Owners and Pilots Association (AOPA)
Andrew Cooper	Representative	Airline Pilots Association
Sherriale Fleming	Airline Station Manager	Alaska Airlines
Christiane Thinnes	Airline Station Manager	Alaska Airlines
Dilli Dhital	Airline Station Manager	American Airlines
Robert Walters	Airline Station Manager	American Airlines
Ben Kessler	Mayor & Director of Development	City of Bexley
Tony Celebrezze	Assistant Director, Building and Zoning Services	City of Columbus
Todd Dieffenderfer	Deputy Director, Department of Neighborhoods	City of Columbus
Carla Williams-Scott	Director, Department of Neighborhoods	City of Columbus
Rory McGuinnes	Deputy Director of Administration	City of Columbus Department of Development
Michael Blackford	Planning and Zoning Administrator	City of Gahanna
Andrew Bowsher	Development Director	City of Reynoldsburg
Zach Woodruff	Director of Economic Development & Public Service	City of Whitehall Planning Commission
Talisa Dixon	Superintendent	Columbus City Schools
Scott Varner	Executive Director of Strategic Partnerships	Columbus City Schools
Justin Anderson	Deputy Project Manager	Columbus Regional Airport Authority
Todd Carter	Sr. Manager, Business Development & Customer Experience	Columbus Regional Airport Authority
Luke Curtis	Supervisor, Airport Operations	Columbus Regional Airport Authority
Casey Denny	Chief Operations Officer	Columbus Regional Airport Authority
Kristen Easterday	Director of Communications and Public Affairs	Columbus Regional Airport Authority
Mark Kelby	Airport Planner	Columbus Regional Airport Authority
Ben Kirtley	Operations Coordinator	Columbus Regional Airport Authority
Tom McCarthy	Chief of Planning and Engineering	Columbus Regional Airport Authority
Betsy Taylor	Airline Business Development	Columbus Regional Airport Authority
Connie Tracy	Senior Communications Specialist	Columbus Regional Airport Authority
Sarah McQuaide	Manager, Communications & Media Relations	Columbus Regional Airport Authority
Christina White	Airline Station Manager	Delta Airlines
Michael Johnson	President	East Columbus Civic Association
Katherine Delaney	Community Planner	FAA - Detroit Airports District Office
Dave Neef	Manager	FAA CMH ATCT
Matt Brown	Planning Administrator	Franklin County
James Schimmer	Director Economic Development & Planning	Franklin County
Kevin White	Airline Station Manager	Frontier Airlines
Mike Anderson	Development Director	Jefferson Township
Eric Bylaw	Director of Flight Operations	Lane Aviation Corporation
Chris Lottridge	Chief Pilot	Limited Brands
Mike Wilkinson	Director of Flight Operations	Limited Brands
Dina Lopez	Strategic Projects Manager	Mid-Ohio Regional Planning Commission
Thea Walsh	Director of Transportation	Mid-Ohio Regional Planning Commission
Paige Kroner	Northeast Regional Representative	National Business Aviation Association
Gib Harris	Chief of Maintenance	Nationwide Insurance Company
Dan Wolfe	Manager	Nationwide Insurance Company
Artie Clark	Flight Operations Compliance Manager	NetJets
Eric Lange	Manager	NetJets
Wallace McLean	Member	North Central Area Commission
Tiffany White	Chair	North Central Area Commission
Elwood Rayford	Chair	Northeast Area Commission
Kenneth Van Pelt	Community Relations Officer	Northeast Area Commission
James Bryant	Aviation Administrator	Ohio Office of Aviation
Jeff Lischak	Airline Station Manager	Republic Airways
Jeff Talbert	General Manager	Signature Flight Support
Tim Cavanagh	Airline Station Manager	Southwest Airlines
Stephanie Morgan	Executive Director	The Ohio State University Air Transportation and Aerospace Campus
Brian Kennedy	Airline Station Manager	United Airlines
LaThya Washington	Airline Station Manager	United Airlines

This page intentionally left blank

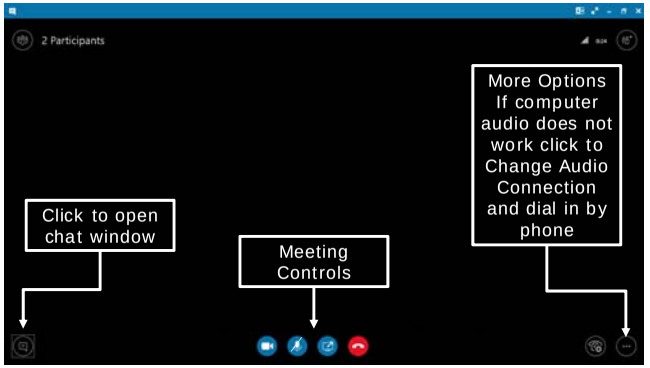
Part 150 Noise Compatibility Study

Technical Advisory Committee Meeting #2
April 8, 2020

JOHN GLENN INTERNATIONAL

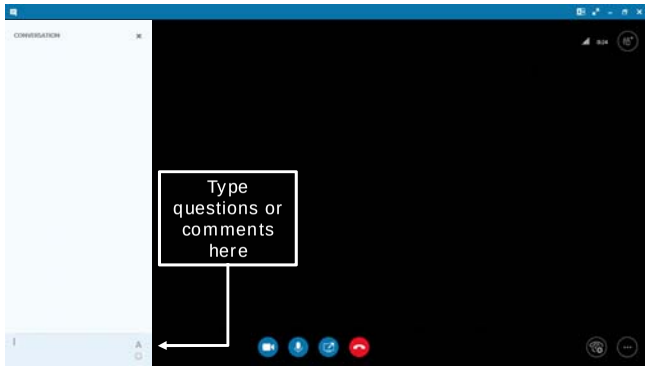
1

Meeting Logistics



2

Meeting Logistics



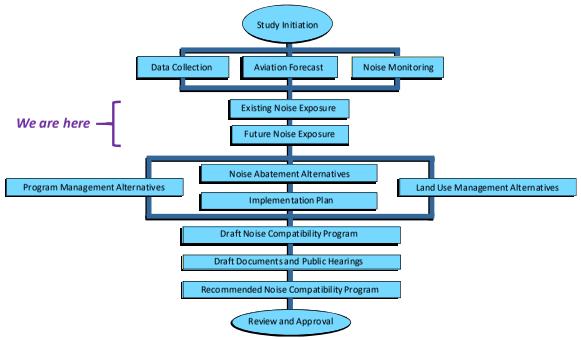
3

Agenda

- Welcome and Discussion of Virtual Meeting Resources
- Part 150 Noise Compatibility Study Process and Schedule
- Noise Monitoring Program Results
- Review of Noise Modeling Data and Methodology
- Existing and Future Baseline Noise Exposure Contours
- Discussion of Noise Compatibility Program (NCP) Measures
- Schedule and Next Steps

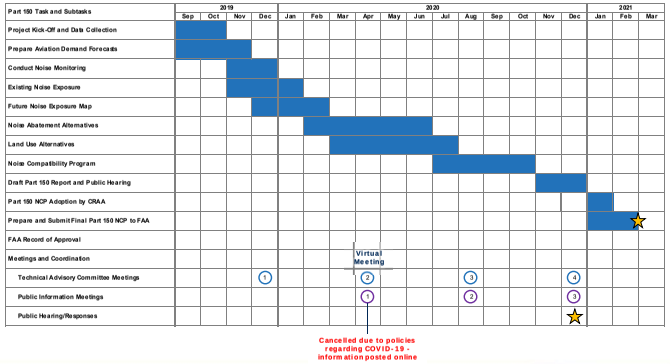
4

Part 150 Noise Compatibility Study Process



JOHN GLENN INTERNATIONAL

Part 150 Noise Compatibility Study Schedule



JOHN GLENN INTERNATIONAL

Noise Monitoring Program

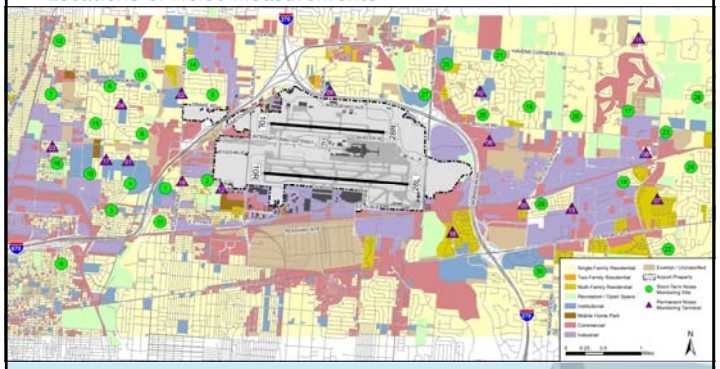
Process and Description

- Purpose
  - Validate/verify the input data in the Aviation Environmental Design Tool (AEDT) with a focus on departures
  - Obtain "real-life" noise measurements to assist in understanding the total noise environment
- Conducted the week of November 11, 2019
- Collected noise readings at 30 sites (for approximately 1 hour at each site)
  - Sites selected to provide wide coverage within residential areas and areas of noise complaints
  - Three person team
  - Used Type 1 Sound Level Meters based on American National Standards Institute (ANSI) standards

JOHN GLENN INTERNATIONAL

Noise Monitoring Program

Locations of Noise Measurements



JOHN GLENN INTERNATIONAL

Noise Monitoring Program

Monitoring Results

- Summary Results
  - Loudest aircraft recorded included, Boeing 737-800/900 and Embraer ERJ-175 aircraft
  - Average number of aircraft observed at each site was 11 to 12
  - Some aircraft noise events were combined with community noise sources such as intermittent car/truck traffic
- Next Steps
  - Further analysis to be completed
  - Incorporate data from permanent noise monitors
  - Compare to AEDT noise database

Existing Data Collection

Noise Monitoring Program Summary (1 of 2)

Site Number	Location	Ambient Noise Level (dB)	Date Monitored	Time Monitored	Type of Events	Number of Events	Aircraft SEL Range	Lmax (loudest noise event)	Loudest aircraft
1	North Cassady near Summit Trace	47.4	11/12/2019	9:11am - 10:11am	Departures	21	69.0 - 87.2	78.1	Boeing 737-700
2	E 13th Ave & Rarig Avenue	47.9	11/12/2019	10:32 am - 11:32am	Departures	8	76.0 – 91.2	83.0	Boeing 737-700
3	E 5th Avenue & Sunbury Road	57.1	11/11/2019	12:15 pm - 1:15 pm	Arrivals & Departures	11	71.9 – 86.1	84.2	Embraer E-175 LR
4	1095 Sunbury Road	47.2	11/12/2019	12:15pm - 1:15pm	Departures	10	69.3 – 88.4	79.1	Boeing 737-800
5	Lone Spruce Rd & Mountain Oak Road	44.1	11/12/2019	9:00am – 10:00am	Arrivals & Departures	21	63.9 – 90.4	80.0	Boeing 737-800
6	Delevan & Brentnell	59.6	11/12/2019	12:30pm – 1:30pm	Arrivals & Departures	10	73.0 – 87.7	82.2	Embraer E-175 LR
7	Joyce Avenue & Maynard Avenue	51.7	11/13/2019	11:45 am – 12:45pm	Arrivals & Departures	10	71.1 – 86.6	77.2	Boeing 737-900
8	Thames Drive north of Argyle Drive	56.6	11/12/2019	10:30am – 11:30am	Arrivals & Departures	12	63.9 – 90.1	80.5	Boeing 737-900
9	Parkwood Ave & Pembroke Ave	48.8	11/11/2019	12:50pm – 1:50pm	Arrivals & Departures	7	54.5 – 79.1	75.7	Embraer E-175 LR
10	Eastlawn Cemetery	46.4	11/11/2019	10:58am – 11:58am	Departures	11	64.3 – 88.1	80.7	Boeing 737-800
11	Margaret Street & Drexel Ave	56.3	11/11/2019	3:25 pm – 4:25 pm	Departures	6	68.7 – 78.3	72.0	Cessna 525
12	Joyce Ave & Genesee Ave	49.3	11/11/2019	12:52pm – 1:52pm	Departures	12	64.5 – 85.9	77.3	Embraer E-175 LR
13	Mock Park - Mock Road & Bar Harbor Road	44.6	11/11/2019	2:02 pm – 3:02 pm	Departures	11	66.7 – 86.4	76.5	McDonnell - Douglas MD-90
14	Baylor Avenue & Pepper Street	50.3	11/11/2019	3:22pm – 4:22pm	Departures	5	68.4 – 85.9	69.5	Bombardier CRJ-900
15	Marina Drive west of Toni Street	45.5	11/12/2019	6:10am – 7:10am	Arrivals & Departures	14	45.6 – 86.8	79.1	Embraer E-175

Existing Data Collection

Noise Monitoring Program Summary (2 of 2)

Site Number	Location	Ambient Noise Level (dB)	Date Monitored	Time Monitored	Type of Events	Number of Events	Aircraft SEL Range	Lmax (loudest noise event)	Loudest aircraft
16	American Addition Park	42.1	11/12/2019	6:20am – 7:20am	Departures	20	38.2 – 84.9	77.9	Boeing 737-800
17	Poppy Hills Drive & Keystone Ranch Court	45.4	11/11/2019	4:10 pm - 5:10pm	Arrivals	6	64.5 - 73.5	63.9	Embraer E-170
18	Onyx Bluff Lane west of Stone Shadow Drive	45.8	11/12/2019	2:45pm – 3:45pm	Arrivals	12	62.8 – 83.3	74.7	Boeing 737-800
19	Rice Avenue & Spruce Hill Drive	42.1	11/12/2019	1:58 pm – 2:58 pm	Arrivals & Departures	12	61.5 – 86.5	80.0	Embraer E-175 LR
20	Hunters Run	45.6	11/12/2019	3:00 pm – 4:00pm	Arrivals	7	62.5 – 75.6	74.9	Hawker 800
21	Tamara Drive & Helmbright Drive	43.8	11/13/2019	9:20am – 10:20am	Arrivals	8	52.0 – 62.8	54.0	Embraer E-175
22	Serenoa Dr & Endora St	54.0	11/13/2019	1:30pm – 2:30pm	Arrivals & Departures	12	47.6 – 79.4	74.6	Embraer E-175 LR
23	Olde Quarry Park	41.4	11/11/2019	1:25:0 PM - 1:59 PM	Arrivals	8	67.0 - 78.9	67.5	McDonnell Douglas MD90
24	Sherridon Drive & Streamwater Drive	38.7	11/13/2019	10:43am – 11:43am	Arrivals	14	57.6 – 78.9	73.3	Bombardier CRJ-701
25	Meadow Green Circle	38.4	11/13/2019	9:00am – 10:00am	Arrivals & Departures	16	42.1 – 77.7	71.5	Bombardier CRJ-200
26	Estate View Drive east of Taylor Station Road	48.8	11/12/2019	3:10 pm – 4:10 pm	Arrivals & Departures	13	52.5 – 80.9	75.7	Bombardier CRJ-701
27	Shepherd Church of the Nazarene	48.2	11/13/2019	12:02pm – 1:02pm	Arrivals	6	66.0 – 71.9	65.2	Boeing 737-700
28	Sand Bar Drive south of Headwater Drive	34.6	11/13/2019	1:10 pm – 2:10pm	Arrivals	10	53.7 – 68.0	68.8	Cessna 560 Citation Excel
29	Lakes at Taylor Crossing Subdivision	42.8	11/12/2019	9:00pm – 10:00pm	Arrivals	11	59.0 – 86.9	80.7	Boeing 737-800
30	Forestview Drive & Revere Road	44.0	11/13/2019	10:16am – 11:16am	Arrivals & Departures	11	63.3 – 72.9	66.2	Airbus A319

Review of Data Collection

Existing Noise Exposure Contour

- Represents an annual-average day (1 year of operations/365 days).
- Data Collection includes:
  - Number of aircraft operations
  - Aircraft types / fleet mix
  - Runway use patterns
  - Flight tracks
- Described with a set of continuous lines that represent equal levels of noise.
- Prepared using the FAA's AEDT (Version 3b)
- Must use specific noise metric: Day-Night Average Sound Level (DNL)
  - DNL represents 24-hour average noise level
  - Penalty for nighttime (10:00 p.m. - 6:59 a.m.) flights (x 10)
  - National standard for all Federal agencies
  - 65 DNL identified as threshold for impact to noise sensitive land uses

Review of Data Collection

Future Noise Exposure Contour

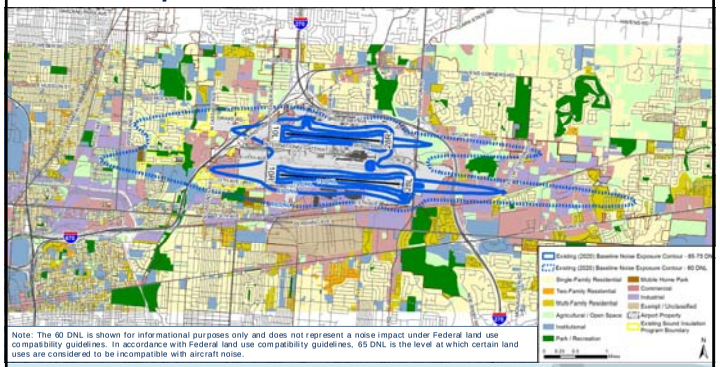
- Represents an annual-average day in 2025
- Based on a forecast of aviation activity
- No major changes expected to fleet mix or destinations served
- Runway use patterns expected to be similar with east/west split based on long-term averages

JOHN GLENN INTERNATIONAL

13

13

Existing (2020) Baseline Noise Exposure Contour



JOHN GLENN INTERNATIONAL

14

14

Existing (2020) Baseline Noise Exposure Contour

Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Population			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Noise-Sensitive Facilities			
Schools / Daycares	0	0	0

JOHN GLENN INTERNATIONAL

15

15

Existing (2020) Baseline Noise Exposure Contour

- East of the Airport, the noise contour primarily reflects usage by aircraft arriving to the airport (thinner noise contours).
- West of the Airport, the noise contour primarily reflects usage of aircraft departing from the airport (wider and rounder noise contours).
- Contour shape and size also reflects a greater use of Runway 10R/28L
- There are no residences or other noise-sensitive land uses within the 65 DNL noise contour.
- The 60 DNL is shown for informational purposes and does not represent a noise impact under Federal land use compatibility guidelines. There are approximately 3,300 residences and 19 noise-sensitive facilities (schools, daycares, and churches) within the 60-65 DNL Existing (2020) Baseline noise contour.

JOHN GLENN INTERNATIONAL

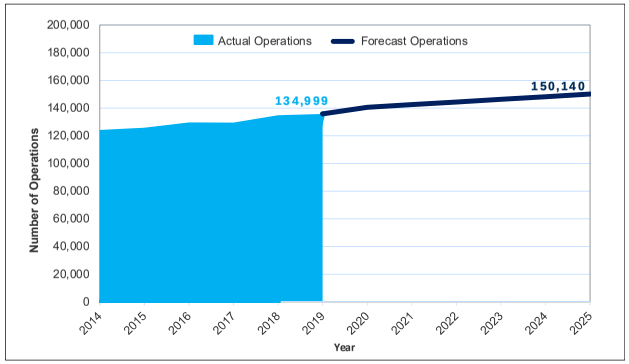
16

16

Pause for Questions

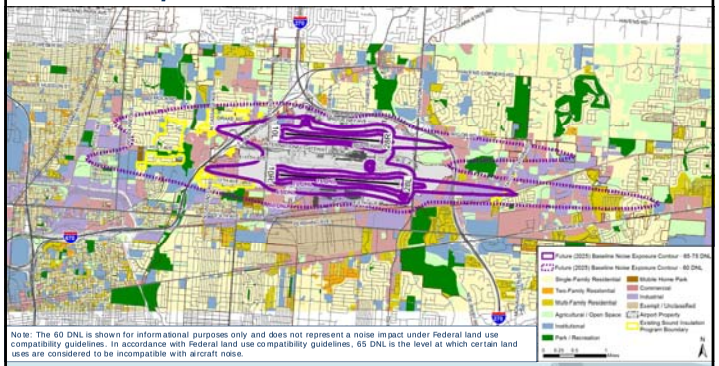
17

Forecast of Aviation Activity



18

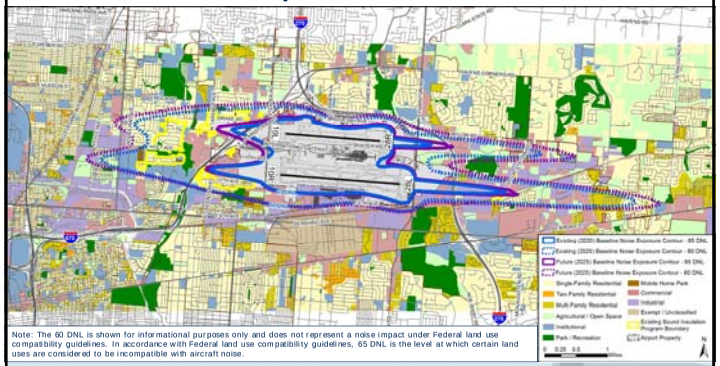
Future (2025) Baseline Noise Exposure Contour



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

19

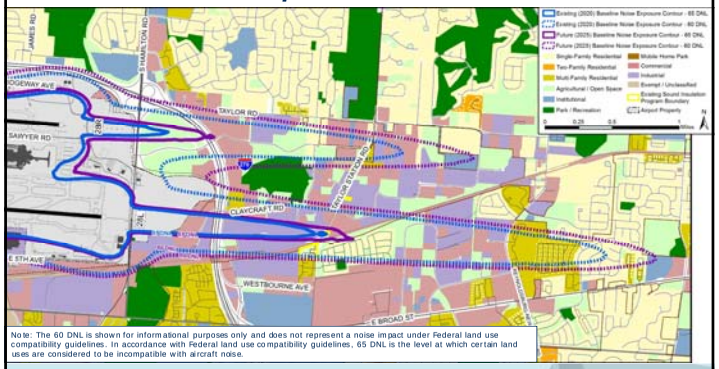
Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

20

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



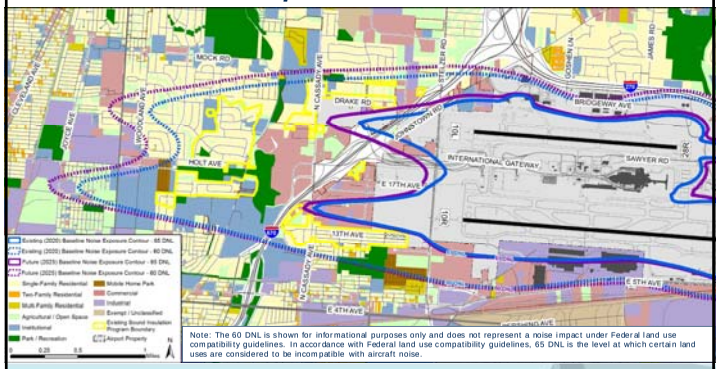
Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

21

21

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

22

22

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

JOHN GLENN INTERNATIONAL

23

23

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

JOHN GLENN INTERNATIONAL

24

24

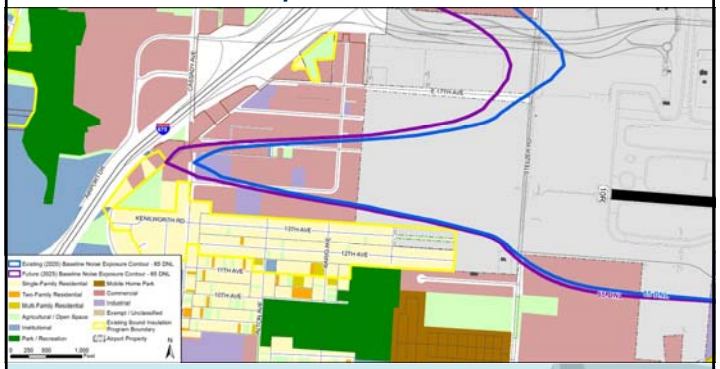
Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

JOHN GLENN INTERNATIONAL

25

25

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



JOHN GLENN INTERNATIONAL

26

26

Future (2025) Baseline Noise Exposure Contour

Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	1	0	0
Gahanna	1	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	**2**	**0**	**0**
Population			
Columbus	3	0	0
Gahanna	3	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	**6**	**0**	**0**
Noise-Sensitive Facilities			
Schools / Daycares	1	0	0

JOHN GLENN INTERNATIONAL

27

27

Future (2025) Baseline Noise Exposure Contour

- The Future (2025) Baseline Noise Exposure Contour reflects conditions expected in the future with no noise abatement procedures other than what is already implemented today.
- Serves as the basis for recommending and evaluating any new noise abatement procedures.
- There is an increase in size of the noise contours compared to Existing (2020) Baseline Noise Exposure Contour due to the forecast increase in aircraft operations at CMH.
- Contour retains a similar shape because no major changes in runway use or flight tracks are expected within the Study Area.
- There are two residences and one noise-sensitive facility within the 65 DNL of the Future (2025) noise contour.
- The 60 DNL is shown for informational purposes and does not represent a noise impact under Federal land use compatibility guidelines. There are approximately 4,400 residences and 29 noise-sensitive facilities (schools, daycares, and churches) within the 60-65 DNL of the Future (2025) Baseline noise contour.

JOHN GLENN INTERNATIONAL

28

28

Pause for Questions

29

Noise Compatibility Program

Types of Program Measures

- Noise Abatement Measures
  - Not applicable outside the 65 DNL
- Corrective Land Use Measures
  - Typically not applicable outside the 65 DNL
- Preventative Land Use Measures
  - Can be applied outside the 65 DNL but typically consist of informational/notification only in areas outside the 65 DNL
- Implementation Measures
  - Designed to assist with the implementation and management of the Noise Compatibility Program (NCP)

30

Group Comments / Discussion

31

Next Steps

Public Meeting Information Online

- Project Website: www.airportprojects.net/cmh-part150
- Questions/comments accepted through May 31
- Notify your constituents
  - Social media imagery and language available
  - Email: mkeister@engagepublicaffairs.com

Part 150 Process

- Next TAC meeting Summer/Fall 2020
- Questions or comments?

CRAA Project Manager
Justin Anderson
614-239-6152
janderson@columbusairports.com

32

John Glenn Columbus International Airport
Part 150 Noise Compatibility Update Study

Technical Advisory Committee Meeting 2

Date: Wednesday, April 8, 2020
Time: 10 A.M. to Noon
Location: Online video conference meeting (using Skype for Business)

Meeting Summary

Meeting Purpose

- Review and discuss the Preliminary Draft Noise Exposure Maps (NEMs)
- Discuss the Noise Compatibility Program (NCP)
- Review schedule and next steps
- To gather input and ask questions about the study

Welcome and Introduction

Justin Anderson, Columbus Regional Airport Authority (CRAA) Project Manager, welcomed everyone for attending the online video conference Technical Advisory Committee (TAC) meeting and thanked them for participating. Justin then turned the meeting over to Rob Adams, Principal-in-Charge, and Chris Sandfoss, Project Manager, both of Landrum and Brown.

Rob mentioned that due to circumstances surrounding the COVID-19 pandemic this TAC meeting was converted from an in-person to an online meeting. TAC members were previously emailed a PDF copy of the online presentation. Rob then discussed meeting logistics and provided visual instructions on how to use the online platform and chat feature, reviewed the meeting agenda and identified where the project is within the study process (slide 5).

Rob then gave an update to the study schedule (slide 6) and reminded everyone that the scheduled public meetings, that were to be held later that evening (on April 8 and Thursday, April 9) had been previously cancelled due to COVID-19. Meeting materials have been made available online (through the project website https://www.airportprojects.net/cmh-part150/) and comments will be accepted through May, 31.

Noise Monitoring

Chris provided an overview of the noise monitoring program. The purpose of this program is to validate and verify data that is input into the Aviation Environmental Design Tool (AEDT) and obtain real-life noise measurements to help understand the overall noise environment in and around the airport. A three-person team collected noise data at 30 sites (for one hour each) around the airport during the week of November 11, 2019. The timing of the data collection focused on departures at

CMH (John Glenn Columbus International Airport). Sites were selected to provide a wide coverage within nearby residential areas and areas of noted noise complaint.

A map provided the visual location for each of the 30 data collections sites (slide 8), while a table listed detailed noise collection data (slides 9-10). Data included: ambient, aircraft noise levels, monitoring dates and times, flight events and loudest noise and aircraft. Chris mentioned that on average there were 11 to 12 aircraft observed during each one hour recording and some aircraft noise events included other community noise sources (i.e. intermittent car and truck traffic). This collected data is being further analyzed along with data from the 16 permanent noise monitors around CMH.

Existing Noise Contour

Chris then gave an overview and explanation of the Existing 2020 Baseline Noise Exposure Contour. The existing noise contour represents an annual-average day (1 year/365 days of operations) and utilized data that includes: number of aircraft operations, fleet types, runway use patterns and flight tracks. Future noise contours are based on a forecast of aviation activity (using existing data) on an annual-average day in 2025. Future noise contours also assume similar runway patters and no major changes to the fleet mix or destinations served. Chris also provided an explanation of the Day-Night Average Sound Level (DNL) and noted that 65 DNL is the national standard for all Federal agencies, as the threshold for impacts to noise sensitive land uses, which includes residences, places of worship, schools, libraries, hospitals, nursing homes, and licensed day care facilities.

A visual map was provided showing the Existing 2020 Baseline Noise Exposure Contour (slide 14). Chris explained that the slide included the 75, 70, 65 and 60 DNL noise contour lines and that the 60 DNL was shown for informational purposes only. The slide also included the existing CMH sound insulation program boundary and the basemap was colored by general land use classifications (showing residential, commercial, industrial and other uses). A chart on the slide showed that there are no housing, residents or noise-sensitive facilities within the 65+ DNL existing noise contour (slide 15). Chris also noted that:

- East of the airport, the noise contour primarily reflects usage by aircraft arriving to the airport, resulting in thinner noise contours
- West of the airport, the noise contour primarily reflects usage of aircraft departing from the airport, resulting in wider and rounder noise contours
- Contour shape and size also reflects a greater use of runway 10R/28L
- The 60 DNL contour does not represent a noise impact under Federal land use compatibility guidelines. There are approximately 3,300 residences and 19 noise-sensitive facilities (schools, daycares, and churches) within the 60-65 DNL existing (2020) baseline noise contour

Questions

At this point, Chris paused for the following questions from TAC members:

Tony Celebreeze (City of Columbus) *referenced the "type of events" from the noise monitoring table and asked why some of the 30 noise monitoring data collection sites only show departures or arrivals, while others show both?* ***Chris Sandfoss (L&B)*** *replied that this was based on aircraft operation flow, east or west arrivals, and that during the measurement period some sites only received noise from arrival operations and some sites only received noise from departure operations. Whereas some sites received noise from both arrivals and departures at locations where operations took-off or landed in one direction but were required to circle back to go the other way (i.e. downwind leg) He also mentioned that the 16 permanent noise monitors collect all arrival and departure noise levels.*

Alfonso Hooper (Brittany Hills Civic Association) *asked what happened to the noise monitoring system at former South Milton Elementary school, and why he does not receive noise updates anymore?* ***Chris Sandfoss (L&B)*** *replied that he believes the monitor is still at that location and monitoring noise.*

Alfonso Hooper (Brittany Hills Civic Association) *replied that there is still significant noise at night and what can be done? He would like to receive monitoring notices and would like to see more homes in the area receive sound insulation.* ***Chris Sandfoss (L&B)*** *responded the team can take a look at older reports, but since the 65 DNL noise contour has shrunk over time, the team does not anticipate any more residential sound insulation, as homes were previously eligible to receive.*

Justin Anderson (CRAA) *noted that there are more aircraft operations during the early morning and afternoon "banks" that may be noticeable to the west of the airport and CRAA has a noise hotline for these issues. He thanked Mr. Hooper for his comments and mentioned this is why this study is being conducted and the reason for the TAC involvement. He will look into whether reports can be mailed.*

Tiffany White (North Central Area Commission) *asked how the team was determining noise data as data from slides 10-11 show the loudest noise event decibels were above 65 DNL? She also asked how the team concluded to not recommend more residential sound insulation?* ***Chris Sandfoss (L&B)*** *reviewed slides 10 and 11, showing the noise data collection results and explained that the data showed peak (Lmax) noise levels that may exceed 65 decibels; however, the DNL metric is an average of these peak levels and non-peak levels. This average is then used to calculate the existing 65 DNL noise contour. There are currently no new noise-sensitive facilities within the 65 DNL noise contour so funding for additional noise insulation is not recommended.*

Forecast of Aviation Activity

Rob provided an overview forecast of aviation activity at CMH. A graph showed actual operations through 2019 with projected operations growing from 134,999 to

150,140 in 2025 (slide 18). Daily operations currently average at 369 and are forecasted to increase to 411 (in 2025). Rob noted that current impacts of the COVID-19 outbreak occurred after the forecast was prepared. The graph includes a recession event in 2020 for modeling purposes, as most economists projected some sort of recession to occur sometime between 2019 and 2025. Rob also noted that demand for flight operations has increased steadily by 65 percent throughout the last 50 years, even during many unplanned events like the 1970's oil embargo, labor strikes in the 1980's, wars and other economic recessions. During these events demand had a "v" shaped dip, showing the decline and rise of operations. Impacts of the COVID-19 outbreak would be expected to cause a temporary decrease in flight activity and that flight activity would eventually return. Therefore, it is reasonable to continue to use the current forecast for planning purposes.

Future Noise Contour

Chris gave an overview and explanation of the Future 2025 Noise Exposure Contour and showed several slides containing maps. These visual maps included the Future 2025 Baseline Noise Exposure Contour (slide 19) and a comparison map overlapping both the Existing 2020 and Future 2025 noise contours (slide 20). Scaled maps showing more details were also provided (slides 21-26).

A chart showed two housing units, six residents and one noise-sensitive facility within the 65 DNL of the Future 2025 Noise Exposure Contour (slide 27). Chris also noted that:

- The future noise contour reflects conditions expected in the future with no noise abatement procedures other than what is already implemented
- The future noise contour serves as the basis for recommending and evaluating any new noise abatement procedures
- There is an increase in size of the future noise contour compared to the existing noise contour due to the forecast increase in aircraft operations at CMH
- The future noise contour retains a similar shape because no major changes in runway use or flight tracks are expected within the study area
- There are two residences and one noise-sensitive facility within the 65 DNL of the Future (2025) noise contour because the residences were previously sound insulated or built in a new subdivision that was constructed after previous noise contours were published.
- The 60 DNL contour does not represent a noise impact under Federal land use compatibility guidelines. There are approximately 4,400 residences and 29 noise-sensitive facilities (schools, daycares, and churches) within the 60-65 DNL of the future noise contour

Questions

At this point, Chris paused for the following questions from TAC members:

Michelle Pounds (Greenview Estates) *mentioned that there appears to be a shift of the noise contour to the west of CMH and asked if any residential homes will be able to utilize the noise insulation program.* ***Chris Sandfoss (L&B)*** *concurred that the 65 DNL would be expected to increase in size due to the forecasted increase in aircraft operations. He noted that the 65 DNL is still smaller than it has been in the past and that there are only two residential units, one in Columbus and one in Gahanna within the 65 DNL of the Future (2025) Noise Exposure Contour.* Over time noise contours have shrunk significantly and can be attributed to redirection of most cargo deliveries to Rickenbacker International Airport, changes in flight operations and quieter airplanes. Chris noted that there were approximately 740 housing units within the 65 DNL of the previous future noise exposure contour developed in 2007.

Matt Brown (Franklin County) *commented: Thank you to the CRAA for including Franklin County in this study and for continuing to be proactive in reducing noise impacts in the communities around the airport. I have to exit for another meeting but wanted to raise one point. It looks like there are an additional 1,100 residences and 10 noise-sensitive land uses within the 60-65 DNL under the forecasted model. I recognize that outside of the 65 DNL does not represent a noise impact under Federal guidelines but I encourage the CRAA to look into possible sound insulation programming in the 60-65 DNL. I am assuming sound insulation programs can have additional benefits for homes such as improving energy efficiency. There may be a way to partner with other public agencies that have compatible goals. Thank you again and I look forward to future discussions.*

Noise Compatibility Program

Chris reviewed the four types of noise compatibility program measures (noise abatement measures, corrective land use measures, preventative land use measures, and program management measures). Based on the results of the noise contour modeling, it is unlikely that the study would recommend new noise abatement or corrective land use measures, as there aren't any impacts within the 65 DNL contour. For preventative land use measures, CMH will continue to inform and notify officials and the public on noise matters. This includes working with existing municipalities and jurisdictions through proper zoning and prevention of new noise sensitive development in or near the 65 DNL contour. Implementation measures include continued management of the Noise Compatibility Program (NCP), periodic reviews and permanent coordination and monitoring of the 16 permanent noise monitors around CMH.

Group Comments/Discussion

Alfonso Hooper (Brittany Hills Civic Association) *mentioned that when they originally studied the Brittany Hill neighborhood for noise insulation only about half*

of the homes were recommended, while an entire neighborhood, adjacent to an airport in Kentucky, was provided with noise insulation features. How are these decisions being made at CMH? Why would there be a difference? ***Rob Adams (L&B)*** *replied that 65 DNL contours doesn't follow jurisdictional or even neighborhood boundaries and there are limits when larger neighborhoods are adjacent to a 65 DNL contour (only residences identified as significantly impacted per the Federal guidelines would receive a noise reduction benefit).* ***Justin Anderson (CRAA)*** *stated that he can discuss this more offline with Mr. Hooper and CMH airport staff.*

Alfonso Hooper (Brittany Hills Civic Association) *asked how does a community get their own independent noise study, instead of this airport study?* ***Rob Adams (L&B)*** *replied that it is very rare for other independent studies to occur, but a city or county can apply for funding for this type of study (though there are very few occurrences/examples of this happening). The best bet is to talk with your elected officials.* ***Alfonso Hooper (Brittany Hills Civic Association)*** *replied "thank you!"*

Justin Anderson (CRAA) addressed *the TAC by thanking the surrounding communities for their planning efforts in mitigating noise sensitive uses. He also reiterated that it is the Airport's intention of being a good neighbor.*

Alfonso Hooper (Brittany Hills Civic Association) *asked if could receive noise monitoring notices for the noise monitoring system at the former South Milton Elementary school.* ***Justin Anderson (CRAA)*** *replied that he can discuss this more offline with CMH Airport staff.*

Next Steps/Conclusion

Chris and Justin then reviewed the next steps (shown below) before ending the meeting.

- Planned public meetings for April 8/9 have been cancelled but all information is available on the project website for review and comment by May 31 (https://www.airportprojects.net/cmh-part150/)
- Request that TAC members notify their constituents about reviewing the project information on the project website
- Social media imagery and language is available (contact Marie Keister at mkeister@engagepublicaffairs.com) to notify constituents about the online project information
- Contact CRAA Project Manager, Justin Anderson with comments or questions at 614-239-6152 or janderson@columbusairports.com
- Next TAC Meeting – Summer/Fall 2020

Meeting Participants

There were 32 participants at the meeting:

Voda Layne	*Air Canada Express*

Ken Copley	*Airline Pilots Association (ALPA)*
Kyle Lewis	*AOPA*
Alfonso Hooper	*Brittany Hills Civic Association*
Tony Celebrezze	*City of Columbus*
Rory McGuiness	*City of Columbus Department of Development*
Justin Anderson	*Columbus Regional Airport Authority*
Denny Casey	*Columbus Regional Airport Authority*
Kristen Easterday	*Columbus Regional Airport Authority*
Joe Hermann	*Columbus Regional Airport Authority*
Mark Kelby	*Columbus Regional Airport Authority*
Tom McCarthy	*Columbus Regional Airport Authority*
Sarah McQuaide	*Columbus Regional Airport Authority*
Mark Grennell	*Federal Aviation Administration - District Office (Detroit)*
Matt Brown	*Franklin County*
Akila Alston	*Greenview Estates*
Michelle Pounds	*Greenview Estates*
Mike Anderson	*Jefferson Twp.*
Robert Adams	*Landrum and Brown*
Jesse Baker	*Landrum and Brown*
Chris Sandfoss	*Landrum and Brown*
Chris Lottridge	*Limited Brands*
Dina Lopez	*Mid-Ohio Regional Planning Commission*
Paige Kroner	*National Business Aviation Association*
Gib Harris	*Nationwide Insurance*
Artie Clark	*NetJets*
Carl Lee	*North Central Area Commission*
Wallace McLean	*North Central Area Commission*
Tiffany White	*North Central Area Commission*
James Bryant	*ODOT Office of Aviation*
Jeff Talbert	*Signature Flight Support*
R Lemons	*No information provided*

Other attendees:

Nick Hoffman	*MurphyEpson Inc.*
Marie Keister	*Engage Public Affairs*

This page intentionally left blank

Technical Advisory Committee (TAC) Meeting #3
September 2, 2020

Invitation Letters

Presentation

Meeting Summary

This page intentionally left blank

Technical Advisory Committee Invite List - September 2, 2020

Name	Title	Organization
Voda Layne	Airline Station Manager	Air Canada Express
Kyle Lewis	Regional Manager, Government Affairs & Airport Advocacy, Great Lakes	Aircraft Owners and Pilots Association (AOPA)
Ken Copley	Aviation Safety Liaison	Airline Pilots Association
Christiane Thinnes	Airline Station Manager	Alaska Airlines
Sherriale Fleming	Airline Station Manager	Alaska Airlines
Dyshae Dixon	Airline Station Manager	Alaska Airlines
Dilli Dhital	Airline Station Manager	American Airlines
Robert Walters	Airline Station Manager	American Airlines
Marci VanDusen	Airline Station Manager	American Airlines
Ben Kessler	Mayor & Director of Development	City of Bexley
Tony Celebrezze	Assistant Director, Building and Zoning Services	City of Columbus
Carla Williams-Scott	Director, Department of Neighborhoods	City of Columbus
DeLana Scales	Program Specialist, Department of Neighborhoods	City of Columbus
Todd Dieffenderfer	Deputy Director, Department of Neighborhoods	City of Columbus
Rory McGuinnes	Deputy Director of Administration	City of Columbus Department of Development
Michael Blackford	Planning and Zoning Administrator	City of Gahanna
Andrew Bowsher	Development Director	City of Reynoldsburg
Zach Woodruff	Director of Economic Development & Public Service	City of Whitehall Planning Commission
John Stanford	Deputy Superintendent	Columbus City Schools
Scott Varner	Executive Director of Strategic Partnerships	Columbus City Schools
Ken Waite	Facility Manager	Columbus International Air Center
Ben Kirtley	Operations Coordinator	Columbus Regional Airport Authority
Betsy Taylor	Airline Business Development	Columbus Regional Airport Authority
Casey Denny	Chief Operations Officer	Columbus Regional Airport Authority
Joe Hermann	Manager, Airport Operations	Columbus Regional Airport Authority
Kristen Easterday	Director of Communications and Public Affairs	Columbus Regional Airport Authority
Luke Curtis	Supervisor, Airport Operations	Columbus Regional Airport Authority
Mark Kelby	Airport Planner	Columbus Regional Airport Authority
Sarah McQuaide	Manager, Communications & Media Relations	Columbus Regional Airport Authority
Todd Carter	Sr. Manager, Business Development & Customer Experience	Columbus Regional Airport Authority
Tom McCarthy	Chief of Planning and Engineering	Columbus Regional Airport Authority
Justin Anderson	Deputy Project Manager	Columbus Regional Airport Authority
Christina White	Airline Station Manager	Delta Airlines
Rashad Armstrong	Airline Station Manager	Delta Airlines
Michael Johnson	President	East Columbus Civic Association
Lamar Peoples	Member	East Columbus Civic Association
Katherine Delaney	Community Planner	FAA - Detroit Airports District Office
Mark Grennell	Program Manager	FAA - Detroit Airports District Office
Dave Neef	Manager	FAA CMH ATCT
Brad Fisher	Planner	Franklin County
James Schimmer	Director Economic Development & Planning	Franklin County
Matt Brown	Planning Administrator	Franklin County
Kevin White	Airline Station Manager	Frontier Airlines
Faz Raiz	Airline Station Manager	Frontier Airlines
Mike Anderson	Development Director	Jefferson Township
Eric Bylaw	Director of Flight Operations	Lane Aviation Corporation
Chris Lottridge	Chief Pilot	Limited Brands
Mike Wilkinson	Director of Flight Operations	Limited Brands
Dina Lopez	Strategic Projects Manager	Mid-Ohio Regional Planning Commission
Thomas Graham	Planner	Mid-Ohio Regional Planning Commission
Thea Walsh	Director of Transportation	Mid-Ohio Regional Planning Commission
Paige Kroner	Northeast Regional Representative	National Business Aviation Association
Gib Harris	Chief of Maintenance	Nationwide Insurance Company
Dan Wolfe	Manager	Nationwide Insurance Company
Artie Clark	Flight Operations Compliance Manager	NetJets
Kenneth Trahan	Vice President, Repair Station Operations	NetJets
Matt Sturges	Government Affairs	NetJets
Tiffany White	Chairperson, Oriole Heights Commissioner	North Central Area Commission
Wallace McLean	At-Large Commissioner	North Central Area Commission
Carl Lee	Planning Co-Chair	North Central Area Commission
Elwood Rayford	Chair	Northeast Area Commission
Kenneth Van Pelt	Community Relations Officer	Northeast Area Commission
James Bryant	Aviation Administrator	Ohio Office of Aviation
Jeff Lischak	Airline Station Manager	Republic Airways
Fred Bauman	Regional Manager - Airport Operations	Republic Airways
Jeff Talbert	General Manager	Signature Flight Support
Tim Cavanagh	Airline Station Manager	Southwest Airlines
Yacobe Lemma	Airline Station Manager	Spirit Airlines
Stephanie Morgan	Executive Director	The Ohio State University Air Transportation and Aerospace Campus
Brian Kennedy	Airline Station Manager	United Airlines
LaThya Washington	Airline Station Manager	United Airlines

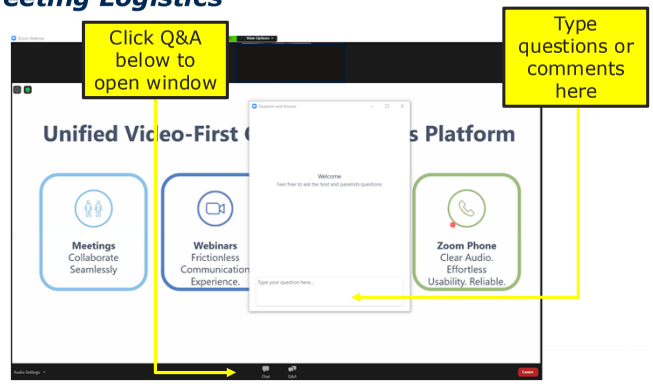
Part 150 Noise Compatibility Study

Technical Advisory Committee Meeting #3
September 2, 2020

JOHN GLENN INTERNATIONAL

1

Meeting Logistics



JOHN GLENN INTERNATIONAL

2

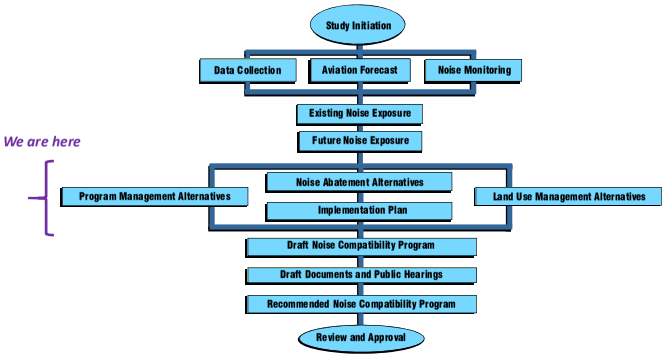
Agenda

- Welcome and Discussion of Virtual Meeting Resources
- Part 150 Noise Compatibility Study Process and Schedule
- Review of Baseline Noise Exposure Contours
- Preliminary Recommendations on Noise Compatibility Program (NCP) Measures
- Schedule and Next Steps

JOHN GLENN INTERNATIONAL

3

Part 150 Noise Compatibility Study Process



JOHN GLENN INTERNATIONAL

4

Part 150 Noise Compatibility Study Schedule

Part 150 Task and Subtasks	2019				2020												2021		
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Project Kick-Off and Data Collection																			
Prepare Aviation Demand Forecasts																			
Conduct Noise Monitoring																			
Existing Noise Exposure																			
Future Noise Exposure Map																			
Noise Abatement Alternatives																			
Land Use Alternatives																			
Noise Compatibility Program																			
Draft Part 150 Report and Public Hearing																			
Part 150 NCP Adoption by CRAA																			
Prepare and Submit Final Part 150 NCP to FAA																			
FAA Record of Approval																			
Meetings and Coordination								Virtual Meetings					Virtual Meetings						
Technical Advisory Committee Meetings				1				2					3			4			
Public Information Meetings								1					2			3			
Public Hearing/Responses																			

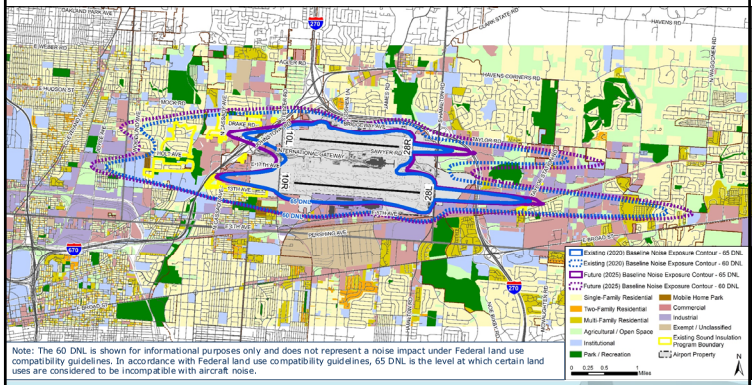
Cancelled due to policies regarding COVID-19 - information posted online

JOHN GLENN INTERNATIONAL

5

5

Review of Baseline Noise Exposure Contours



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

6

6

Review of Baseline Noise Exposure Contours

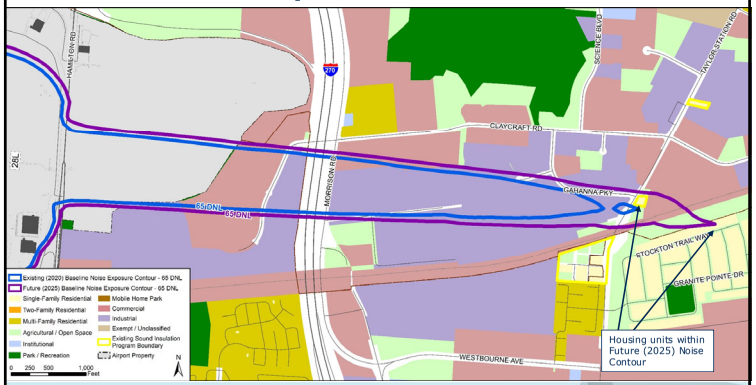
Category	Existing (2020) Baseline	Future (2025) Baseline
Housing Units		
65 – 70 DNL	0	2
70+ DNL	0	0
Population		
65 – 70 DNL	0	6
70+ DNL	0	0
Noise Sensitive Facilities (Churches, Schools, Libraries, and Nursing Homes)		
65 – 70 DNL	1	1
70+ DNL	0	0

JOHN GLENN INTERNATIONAL

7

7

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

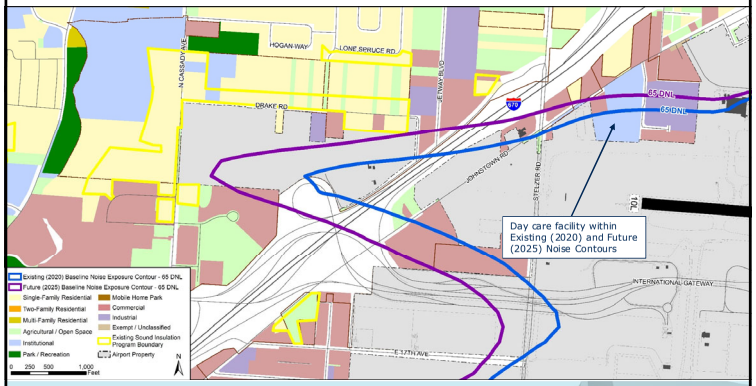


JOHN GLENN INTERNATIONAL

8

8

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



JOHN GLENN INTERNATIONAL 9

9

Pause for Questions

JOHN GLENN INTERNATIONAL 10

10

Noise Compatibility Program

Types of Program Measures

- Noise Abatement Measures
  - Not applicable outside the 65 DNL
  - Examples include preferential runway use, flight track adjustments, profile/thrust settings
- Corrective Land Use Measures
  - Typically not applicable outside the 65 DNL
  - Examples include property acquisition and sound insulation
- Preventative Land Use Measures
  - Can be applied outside the 65 DNL but typically consist of informational/notification only in areas outside the 65 DNL
  - Examples include compatible use zoning and noise standards in building codes
- Program Management (Implementation) Measures
  - Designed to assist with the implementation and management of the Noise Compatibility Program (NCP)
  - Examples include Airport staff dedicated to program management and outreach

JOHN GLENN INTERNATIONAL 11

11

Current Noise Compatibility Measures

Noise Abatement Measures

- **NA-1:** Amend the John Glenn Columbus International Airport nighttime maintenance Run-up Policy to designate an additional run-up location north of the airfield for the relocation of the NetJets (EJA) 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 NetJets facility.

  Recommendation: Continue measure

- **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 along I-270.

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

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 12

12

Current Noise Compatibility Measures

Noise Abatement Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 13

13

Current Noise Compatibility Measures

Noise Abatement Measures

- **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.

  Recommendation: Continue measure

- **NA-5:** Measure previously withdrawn

JOHN GLENN INTERNATIONAL 14

14

Current Noise Compatibility Measures

Noise Abatement Measures

- **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.

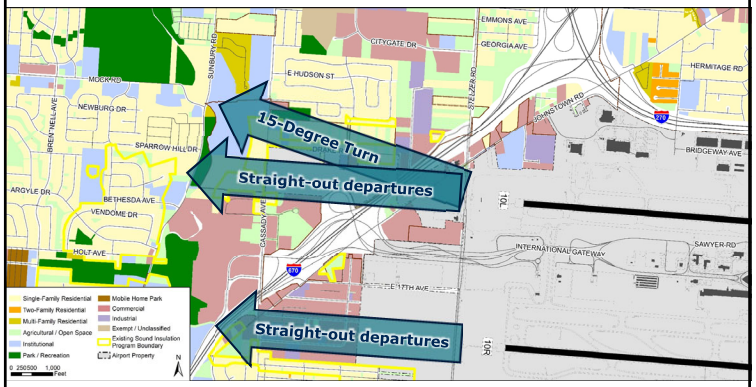
  Status: Implemented – This measure is used when traffic conditions warrant.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 15

15

15-Degree Departure Turn



JOHN GLENN INTERNATIONAL 16

16

Current Noise Compatibility Measures

Noise Abatement Measures

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

  Status: Currently being implemented – RNAV/RNP procedures are being developed independently by the FAA and are expected to be implemented in April 2021.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 17

17

Current Noise Compatibility Measures

Noise Abatement Measures

- **NA-8:** Construct a noise berm/wall.

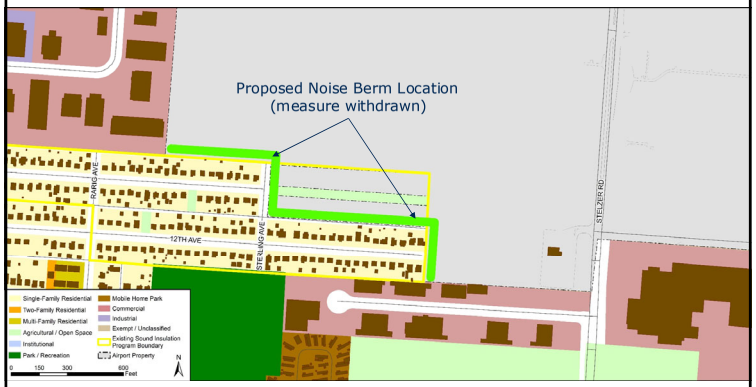
  Status: Not Implemented - This measure was considered for the acquisition area along East 13th Avenue as mitigation for the runway relocation. Further investigation and surveys of property owners determined that a noise berm in the location was not desirable.

  Recommendation: Withdraw measure

JOHN GLENN INTERNATIONAL 18

18

Previously Proposed Noise Berm Location



JOHN GLENN INTERNATIONAL 19

19

Current Noise Compatibility Measures

Noise Abatement Measures

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

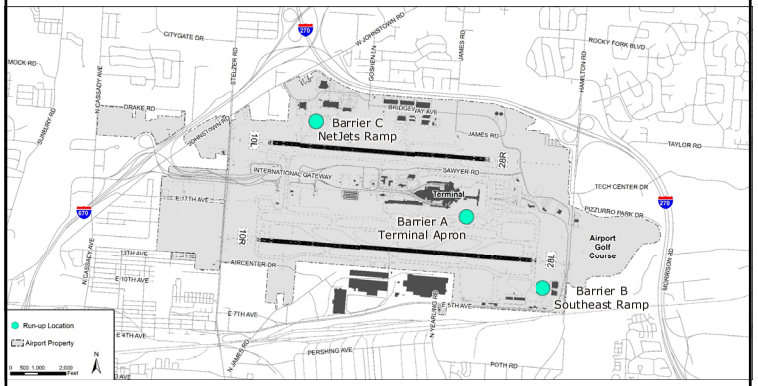
  Status: Not Implemented – Potential replacement and relocation of the Ground Run-Up Barrier B was proposed to accommodate larger aircraft associated with potential new maintenance hangars proposed for the southeast airfield at CMH. The proposed maintenance hangars were not constructed. Therefore, an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

  Recommendation: Continue Measure (if needed)

JOHN GLENN INTERNATIONAL 20

20

Existing Run-up Barrier Locations



JOHN GLENN INTERNATIONAL

Pause for Questions

JOHN GLENN INTERNATIONAL

Current Noise Compatibility Measures

Land Use 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.

  Recommendation: Continue measure with modification to update program boundary based upon Future NCP from this Part 150 Study.

  Based on the preliminary results of the noise contour modeling, there would be no new residences located within the 65+ DNL program boundary; therefore, no new noise insulation would be offered.

JOHN GLENN INTERNATIONAL

Current Noise Compatibility Measures

Land Use Measures

- **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.

  Recommendation: Continue measure with modification to update program boundary based upon Future NCP from this Part 150 Study.

  Based on the preliminary results of the noise contour modeling, there would be no churches located within the 65+ DNL program boundary; therefore, no new noise insulation would be offered.

JOHN GLENN INTERNATIONAL

Current Noise Compatibility Measures

Land Use Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 25

25

Current Noise Compatibility Measures

Land Use Measures

- **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.

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

  Recommendation: Continue measure based on previously-approved boundary. Use of the fixed boundary that follows existing physical features provides for consistency for land use planning and avoids changing boundaries in the future.

JOHN GLENN INTERNATIONAL 26

26

Current Noise Compatibility Measures

Land Use Measures

- **LU-5:** Seek cooperation from Franklin County to amend the Franklin County Zoning Resolution, Section 660.07, Avigation Easement, to require applicant 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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 27

27

Current Noise Compatibility Measures

Land Use Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 28

28

Current Noise Compatibility Measures

Land Use Measures

- **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: Not implemented – Coordination with local jurisdictions has occurred; however, subdivision regulations have not been updated.

  Recommendation: Continue measure

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 29

29

Current Noise Compatibility Measures

Land Use Measures

- **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).

  Status: 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.

  Recommendation: Continue measure

- **LU-10:** Periodically place advertisements in a variety of media outlets delineating the boundaries of the proposed Airport Land Use Management District (ALUMD).

  Status: Not implemented – The ALUMD has not been adopted. The CRAA makes the noise exposure maps and other noise compatibility information available on its website.

  Recommendation: Continue measure

- **LU-11:** Measure previously withdrawn

JOHN GLENN INTERNATIONAL 30

30

Current Noise Compatibility Measures

Land Use Measures

- **LU-12:** Develop an Airport Land Use Management District (ALUMD) based on the 2023 Noise Exposure Map/Noise Compatibility Program (NCP) noise contour, and other 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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 31

31

Current Noise Compatibility Measures

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.

  Recommendation: Continue measure

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

  Status: Ongoing – The CRAA continues to operate the Noise Management Office to support the efforts to minimize the noise impact of CMH.

  Recommendation: Continue measure

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

  Status: Ongoing – The CRAA maintains public involvement activities, including the 24-hour noise hotline, WebTrak tracking system, and noise monitoring system.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 32

32

Current Noise Compatibility Measures

Program Management Measures

- **PM-4:** Maintain the noise and flight track monitoring system and expand and upgrade the system as necessary. Add four 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.

  Recommendation: Continue measure with modification to remove the recommendation to install additional NMTs since that recommendation is complete.

JOHN GLENN INTERNATIONAL 33

33

Current Noise Compatibility Measures

Program Management Measures

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

  Status: Ongoing.

  Recommendation: Continue measure

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

  Status: Implemented (*Not active at this time*)

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 34

34

Group Comments / Discussion

JOHN GLENN INTERNATIONAL 35

35

Next Steps

Public Meeting Information Online

- Project Website: www.airportprojects.net/cmh-part150
- Notify your constituents
  - Social media imagery and language available
  - Email: mkeister@engagepublicaffairs.com

Part 150 Process

- Publish Draft Part 150 Noise Compatibility Program
- Next TAC meeting and Public Hearing Winter 2020

Questions or comments? Please provide comments by October 2nd

CRAA Project Manager
Justin Anderson
614-239-6152
janderson@columbusairports.com

JOHN GLENN INTERNATIONAL 36

36

Supplemental Slides

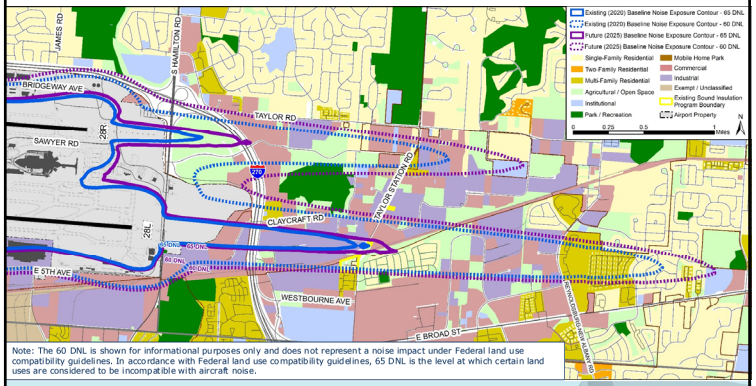
close-in area views of noise contours

JOHN GLENN INTERNATIONAL

37

37

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



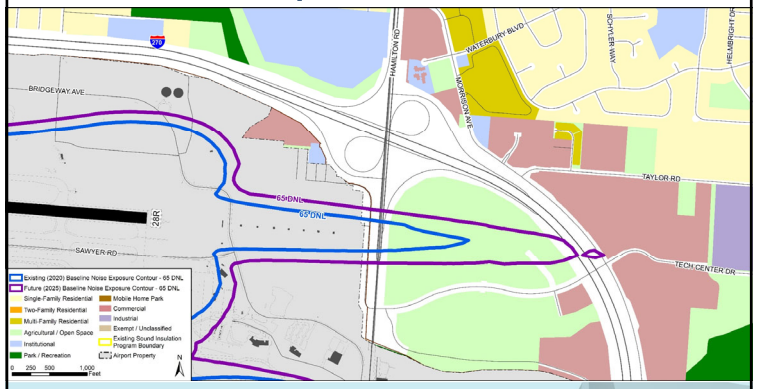
Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

38

38

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

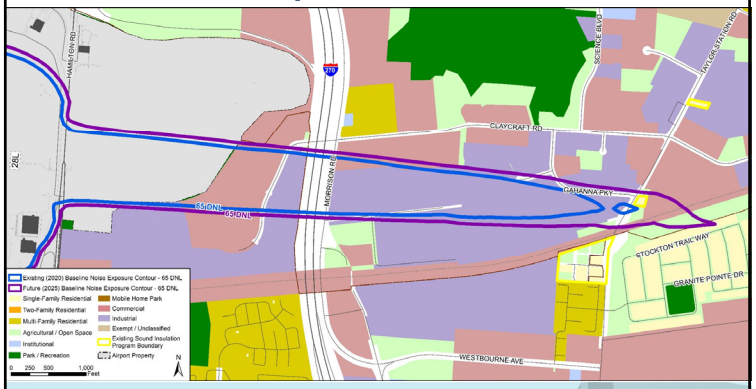


JOHN GLENN INTERNATIONAL

39

39

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

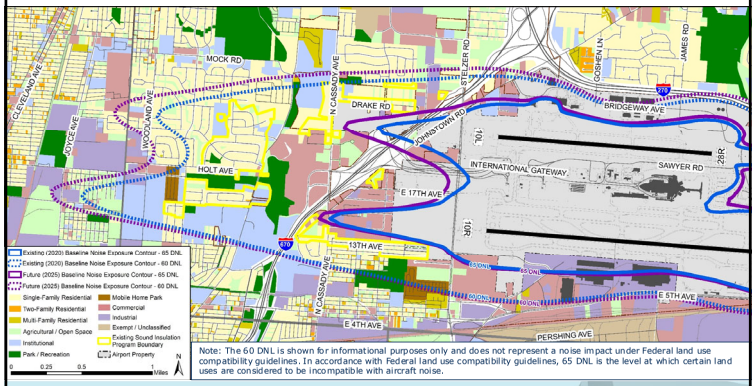


JOHN GLENN INTERNATIONAL

40

40

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



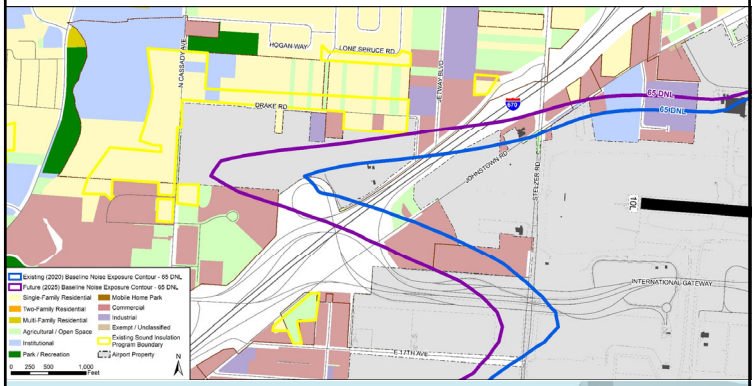
Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

41

41

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

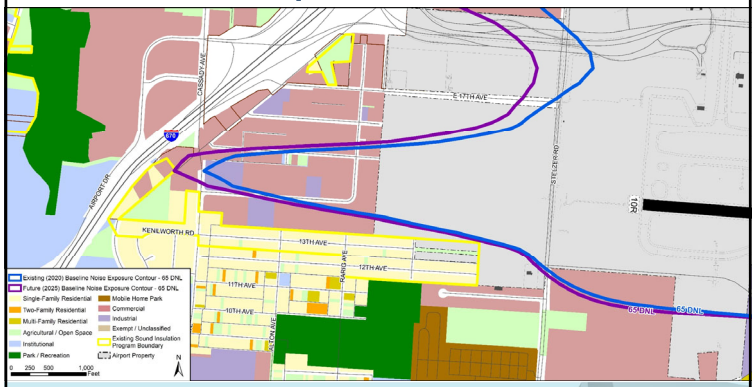


JOHN GLENN INTERNATIONAL

42

42

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



JOHN GLENN INTERNATIONAL

43

43

John Glenn Columbus International Airport
Part 150 Noise Compatibility Update Study

Technical Advisory Committee Meeting 3

Date: Wednesday, September 2, 2020
Time: 2 to 4 PM
Location: Online video conference meeting (using Zoom Meeting for Business)

Meeting Summary

Meeting Purpose

- Review the baseline noise exposure contours
- Review and discuss the preliminary recommendations on Noise Compatibility Program (NCP) measures
- Review schedule and next steps
- To gather input and ask questions about the study

Welcome and Introduction

Justin Anderson, Columbus Regional Airport Authority (CRAA) Project Manager, welcomed everyone and thanked them for attending the online video conference Technical Advisory Committee (TAC) meeting. Justin then provided a brief recap of the previous two TAC meetings and noted that if members are not able to attend, meeting materials have been made available online (through the project website: https://www.airportprojects.net/cmh-part150/). Justin also reminded everyone about the virtual public meeting being held later in the evening.

Moderator Marie Keister, Engage Public Affairs, provided a brief overview of the meeting logistics and how to ask questions using the video software. Justin then turned the meeting over to Chris Sandfoss, Project Manager, Landrum and Brown.

Chris reviewed the meeting agenda, identified the study process and progress to date (slide 4), and provided an updated study schedule (slide 5). Submittal of the draft Noise Compatibility Program to the Federal Aviation Administration (FAA) would likely be in early 2021.

Baseline Noise Exposure Contours

Chris showed the Existing (2020) Baseline Noise Exposure contour (slide 6), based on existing conditions, and the Future (2025) Baseline Noise Exposure Contour based on operating levels forecasted five years into the future. The analysis is based on the level of operations and forecast prior to COVID-19, taking a more conservative approach to show anticipated noise levels once normal flight activity resumes. The 65 DNL contours are the FAA's regulated threshold for a significant noise impact.

A land use analysis was conducted to show the number of noise sensitive land uses for both the Existing (2020) Baseline and the Future (2025) Baseline Noise Exposure Contours. Zero residential noise sensitive land uses were located within the 2020 65 DNL contour and only one facility (a daycare operated by Franklin County) is impacted. For 2025, there are two impacted residences and the aforementioned daycare facility within the 65 DNL. A table graph and scaled map graphics show these locations in more detail (slides 7, 8 and 9). Of the two residential properties, one was previously eligible and offered sound insulation but declined, and the second was built after the previous noise exposure contour was published and is considered eligible for the program.

Questions

Alfonso Hooper (Brittany Hills Civic Association) *requested airport overlay data for the Brittany Hills neighborhood.*

Justin Anderson (CRAA) *noted that Chris will be explaining the 65 DNL is shrinking due to aircraft becoming quieter. The forecasted operations for 2015 were not as significant as forecasted in the 2007 study. This means there will be fewer properties eligible for sound insultation.*

Chris Sandfoss (L&B) *noted that the current study has confirmed that the Brittany Hills neighborhood is now outside the 65 DNL contour. Chris also reiterated that aircraft technologies have improved, and airlines have phased out some of their older, louder aircraft.*

Tony Celebreeze (City of Columbus *asked if the single-family residence that declined noise mitigation was a rental or owner occupied?*

Chris Sandfoss (L&B) *noted that he believes it was owner occupied but the team would check on this detail.*

Alfonso Hooper (Brittany Hills Civic Association) *asked about zoning requirements for new builds in regard to the airport overlay.*

Chris Sandfoss (L&B) *acknowledged there is an airport zoning overlay but said the airport doesn't have land use approval authority over new construction. That authority falls under the City of Columbus. Though any requests for new construction within the 65 DNL noise contour are reviewed by the Airport Authority for applicability to those areas and recommendations are made for constructing to certain sound attenuation standards.*

Tony Celebreeze (City of Columbus) *stated the Columbus Building and Zoning reviews building plans and would address any of those issues if they are pertinent to the airport overlay.*

Justin Anderson (CRAA) *noted that this information would be noticed on the City's GIS maps which flag the overlay district.*

Marie Keister (Engage Public Affairs) *asked Chris if he could confirm whether or not Brittany Hills is within the airport overlay.*

Chris Sandfoss (L&B) *mentioned some portions of Brittany Hills may still be in the airport overlay district for now, as it is based on noise exposure patterns from the 2007 study. He noted that Brittainy Hills may no longer be in the overlay zone once the noise contour maps are approved the FAA next year.*

Noise Compatibility Program

Chris then provided a discussion of the initial recommendations for the noise compatibility program measures. He first reviewed the three categories of measures (slide 11) followed by the existing measures that are currently approved. (Slides 12 through 34).

Questions

Alfonso Hooper (Brittany Hills Civic Association) *asked again about developer sign-off and sound proofing on residential and other potential noise compatible projects near the airport.*

Justin Anderson (CRAA) *responded that when there is new development within the airport overlay zone the affected cities reach out to the airport for their opinion. Airport staff reviews and provides comments back to the city to make sure that the land use is compatible. He noted that the City of Columbus has a very good working relationship with the airport.*

Alfonso Hooper (Brittany Hills Civic Association) *mentioned he has previous paperwork from several years ago demonstrating a developer signed that acknowledge he was aware of the noise requirements but was willing to proceed with the development anyway. Was the airport familiar with that situation?*

Mark Kelby (CRAA) *said he was not aware of any sign-off procedures but that he and Justin would look into this and include it on the list of items to discuss with Mr. Hooper later.*

Next Steps/Conclusion

Chris reviewed the next steps (shown below) before ending the meeting.

- A virtual public meeting will be held later that evening from 5:00-7:00 PM;
- Comments on this information are being accepted through Oct. 2.
- Request that TAC members notify their constituents about reviewing the project information on the project website
- Social media imagery and language is available (contact Marie Keister at mkeister@engagepublicaffairs.com) to notify constituents about the online project information
- Next task is the publish the draft Part 150 Noise Compatibility Program
- Next TAC Meeting and Public Hearing – Winter 2020/21
- Contact CRAA Project Manager, Justin Anderson with comments or questions at 614-239-6152 or janderson@columbusairports.com

Final Comments

Marie asked TAC members to share their comments on whether the recommendations seemed reasonable.

- One TAC member said it appeared reasonable.
- One TAC member sent a follow up email: "This does seem like a no brainer as the area has shrunk and thus not impacting near as many residential units as in the past."

Meeting Participants

Kyle Lewis	*AOPA*
Alfonso Hooper	*Brittany Hills Civic Association*
Ben Kessler	*City of Bexley*
Tony Celebrezze	*City of Columbus*
De Lana Scales	*City of Columbus*
Michael Blackford	*City of Gahanna*
Danny Adams	*Columbus Regional Airport Authority*
Justin Anderson	*Columbus Regional Airport Authority*
Luke Curtis	*Columbus Regional Airport Authority*
Matt DeCubellis	*Columbus Regional Airport Authority*
Casey Denny	*Columbus Regional Airport Authority*
Kristen Easterday	*Columbus Regional Airport Authority*
Joe Hermann	*Columbus Regional Airport Authority*
Mark Kelby	*Columbus Regional Airport Authority*
Sarah McQuaide	*Columbus Regional Airport Authority*
Brian Sarkis	*Columbus Regional Airport Authority*
Betsy Taylor	*Columbus Regional Airport Authority*
Marie Keister	*Engage Public Affairs*
Mark Grennell	*FAA - Detroit Airports District Office*
Robert Tykoski	*FAA - Detroit Airports District Office*
Faz Riaz	*Frontier Airlines*
Rob Adams	*Landrum and Brown*
Chris Sandfoss	*Landrum and Brown*
Dina Lopez	*Mid-Ohio Regional Planning Commission*
Nick Hoffman	*MurphyEpson Inc.*
Artie Clark	*NetJets*
James Bryant	*ODOT Office of Aviation*
Stephanie Morgan	*OSU Air Transportation/Aerospace Campus*

Technical Advisory Committee (TAC) Meeting #4
July 29, 2021

Invitation Letters

Presentation

Meeting Summary

This page intentionally left blank

From: Marie Keister
Sent: Monday, June 14, 2021 2:41 PM
Subject: John Glenn Columbus International Airport (CMH) Part 150 Noise Compatibility Study TAC Meeting #4

Dear Technical Advisory Committee (TAC) member:

We look forward to your participation at the next **virtual TAC meeting on July 29 from 3:00-4:00 PM**. This will be our final TAC meeting for the Part 150 Noise Compatibility Program. At this meeting, we will review the Noise Compatibility Program (NCP) recommendations that were presented at our last meeting. Please be advised we did not receive any comments on our recommendations presented during our last TAC meeting. Therefore, the content of this meeting will be fairly similar to our last TAC meeting and will provide one more opportunity for review and comment on the recommended NCP measures. Following the TAC Meeting, the recommended NCP measures will be presented to the public at a separate Public Meeting/Hearing and then will be submitted to the FAA for approval.

In addition to the TAC Meeting, a Public Meeting/Hearing is scheduled to be held on 7/29 (5:30-7:00 PM). You are welcome to join the Public Meeting/Hearing after the TAC Meeting. More information and a link to join the Public Meeting/Hearing will follow.

If you have any questions, please contact our CRAA Project Manager, Justin Anderson, at 614-239-6152 or at janderson@columbusairports.com. We value and appreciate your continued participation and input. I will also send this information via an Outlook invitation.

Marie S. Keister, APR, AICP
Stakeholder & Public Involvement Lead
John Glenn Columbus International Airport Part 150 Noise Compatibility Study

Use the link below to join the TAC meeting on July 29 from 3:00-4:00 PM:

https://zoom.us/j/98623154015?pwd=N0xCWGp1ODR0c2dDaWw3b2xHWEtGUT09

Meeting ID: 986 2315 4015
Passcode: 150212
One tap mobile
+13126266799,,98623154015#,,,,*150212# US (Chicago)
+16465588656,,98623154015#,,,,*150212# US (New York)

Dial by your location
+1 312 626 6799 US (Chicago)
+1 646 558 8656 US (New York)
+1 301 715 8592 US (Washington DC)
+1 346 248 7799 US (Houston)
+1 669 900 9128 US (San Jose)
+1 253 215 8782 US (Tacoma)
833 548 0282 US Toll-free
877 853 5247 US Toll-free
888 788 0099 US Toll-free
833 548 0276 US Toll-free
Meeting ID: 986 2315 4015
Passcode: 150212
Find your local number: https://zoom.us/u/abjC2csBte

Technical Advisory Committee Invite List - July 29, 2021

Name	Title	Organization
Ken Copley	Aviation Safety Liaison	Airline Pilot Association
Dyshae Dixon	Airline Station Manager	Alaska Airlines
Christiane Thinnes	Airline Station Manager	Alaska Airlines
Dilli Dhital	Airline Station Manager	American Airlines
Marci Van Dusen	Airline Station Manager	American Airlines
Kyle Lewis	Regional Manager, Government Affairs & Airport Advocacy, Great Lakes	AOPA
Alfonso Hooper	Brittany Hills Commissioner	Brittany Hills Civic Association
Ben Kessler	Mayor & Director of Development	City of Bexley
Tony Celebrezze	Assistant Director, Building and Zoning Services	City of Columbus
De Lana Scales	Department of Neighborhoods	City of Columbus
Todd Dieffenderfer	Department of Neighborhoods	City of Columbus
Jamie Edwards	Executive Assistant	City of Columbus
Carla Williams-Scott	Department of Neighborhoods	City of Columbus
Rory McGuiness	Deputy Director of Administration	City of Columbus Department of Development
Dr. John Stanford	Deputy Superintendent	City of Columbus Schools
Erik Roush, PHD	Policy & Government Affairs	City of Columbus Schools
Michael Blackford	Interim Director of Planning & Development	City of Gahanna
Andrew Bowsher	Development Director	City of Reynoldsburg
Zach Woodruff	Director of Economic Development & Public Service	City of Whitehall Planning Commission
Justin Anderson	Deputy Project Manager	Columbus Regional Airport Authority
Luke Curtis	Operations Supervisor	Columbus Regional Airport Authority
Casey Denny	Chief Asset Officer	Columbus Regional Airport Authority
Kristen Easterday	Director of Communications and Public Affairs	Columbus Regional Airport Authority
Joe Hermann	Manager, Airport Operations	Columbus Regional Airport Authority
Mark Kelby	Airport Planner	Columbus Regional Airport Authority
Sarah McQuaide	Manager, Communications & Media Relations	Columbus Regional Airport Authority
Betsy Taylor	Airline Business Development	Columbus Regional Airport Authority
Todd Carter	Sr. Manager, Business Development & Customer Experience	Columbus Regional Airport Authority
Benjamin Kirtley	Operatioons Coordinator	Columbus Regional Airport Authority
Tom McCarthy	Chief of Planning and Engineering	Columbus Regional Airport Authority
Robert Gesterling	Airline Station Manager	Delta Airlines
Lamar Peoples	President	East Columbus Civic Association
Marie Keister	President	Engage Public Affairs
Steven Mack	Air Traffic Manager (acting)	FAA CMH ATCT
Ronny Richards	Operations Manager	FAA CMH ATCT
Mark Grennell		Federal Aviation Administration - Detroit Airports District Office
Katherine Delaney	Community Planner	Federal Aviation Administration - Detroit Airports District Office
Matt Brown	Planning Administrator	Franklin County
Brad Fisher	Planner	Franklin County
Jim Schimmer	Director Economic Development & Planning	Franklin County
Faz Riaz	Airline Station Manager	Frontier Airlines
Mike Anderson	Development Director	Jefferson Twp.
Rob Adams	Principal	Landrum and Brown
Jesse Baker		Landrum and Brown
Chris Sandfoss	Environmental Project Manager	Landrum and Brown
Eric Bylaw	Director of Flight Operations	Lane Aviation Corporation
Chris Lottridge	Chief Pilot	Limited Brands
Mike Wilkinson	Director of Flight Operations	Limited Brands
Dina Lopez	Strategic Projects Manager	Mid-Ohio Regional Planning Commission
Thomas Graham	Planner	Mid-Ohio Regional Planning Commission
Thea Walsh	Director of Transportation	Mid-Ohio Regional Planning Commission
Nick Hoffman	Planner + Project Manager	MurphyEpson Inc.
Brittany Davies		National Business Aviation Association
Gib Harris		Nationwide Insurance
Dan Wolfe	Manager	Nationwide Insurance
Artie Clark	Flight Operations Compliance Manager	NetJets
Matt Sturges	Government affairs	NetJets
Kenneth Trahan	Vice President, Repair Station Operations	NetJets
Wallace McLean	At-Large Commissioner	North Central Area Commission
Tiffany White	Chairperson, Oriole Heights Commissioner	North Central Area Commission
Carl Lee	Planning Co-chair	North Central Area Commission
Elwood Rayford	Chair	Northeast Area Commission
Kenneth Van Pelt	Community Relations Officer	Northeast Area Commission
James Bryant	Aviation Administrator	ODOT Office of Aviation
Fred Bauman	Regional Manager - Airport Operations	Republic Airways
Jeff Talbert	General Manager	Signature Flight Support
Tim Cavanagh	Airline Station Manager	Southwest Airlines
Yacobe Lemma	Airline Station Manager	Spirit Airlines
Ken Waite	Facility Manager	The Columbus International Air Center
Stephanie Morgan	Executive Director of the Air Transportation and Aerospace Campus	The Ohio State University Air Transportation/Aerospace Campus
Vinnie Pestrichella	Airline Station Manager	United Airlines
LaThya Washington	Airline Station Manager	United Airlines

Part 150 Noise Compatibility Study

Technical Advisory Committee Meeting #4
July 29, 2021

JOHN GLENN INTERNATIONAL

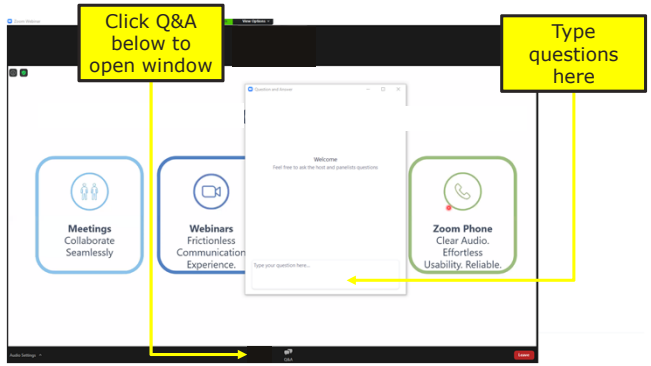
1

Agenda

- Welcome and Discussion of Virtual Meeting Resources
- What's happening at CMH
- Part 150 Noise Compatibility Study Process
- Noise Compatibility Planning at CMH
- Existing and Future Baseline Noise Exposure Contours
- Recommended Noise Compatibility Program (NCP) Measures
- Next Steps

2

Meeting Logistics



3

What's happening at CMH?

Traffic rebound led by leisure travelers

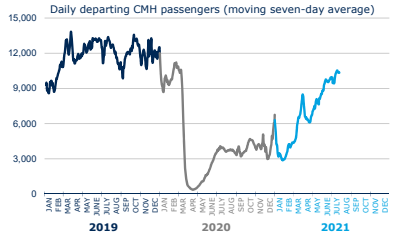
New service added

Breeze
Charleston, Hartford, New Orleans, Norfolk, Tampa

Southwest
Miami & Panama City Beach (weekly)
Myrtle Beach & Sarasota

spirit
Los Angeles, Pensacola

UNITED
Charleston, Hilton Head Island, Portland (Maine) summer only service

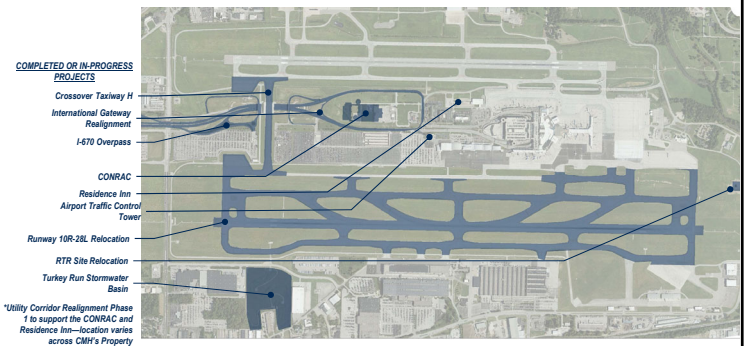


Recently announced service return to critical markets lost during COVID-19

- Boston: Delta service returned | American launching mid-August
- Toronto: Air Canada service returned

4

Master Plan in Action

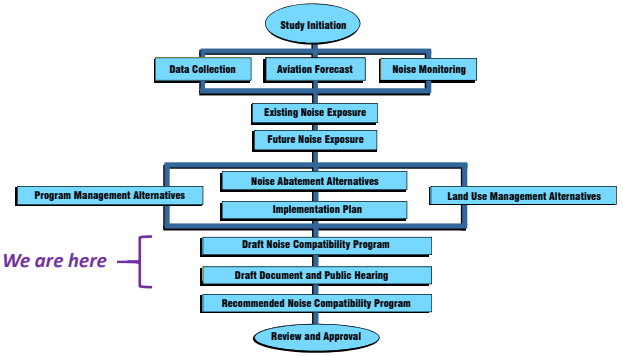


JOHN GLENN INTERNATIONAL

5

5

Part 150 Noise Compatibility Study Process

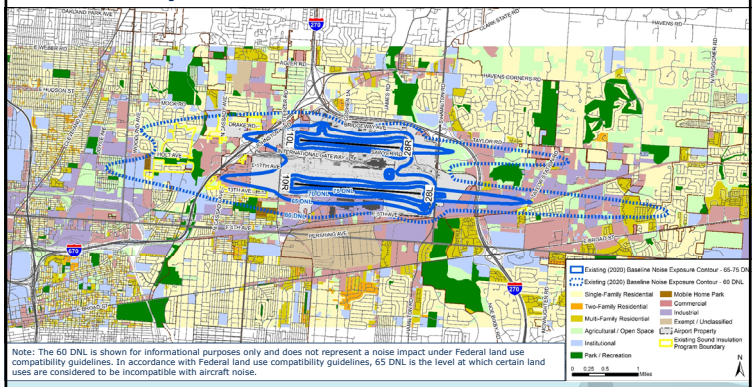


JOHN GLENN INTERNATIONAL

6

6

Existing (2020) Baseline Noise Exposure Contour



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

7

7

Existing (2020) Baseline Noise Exposure Contour

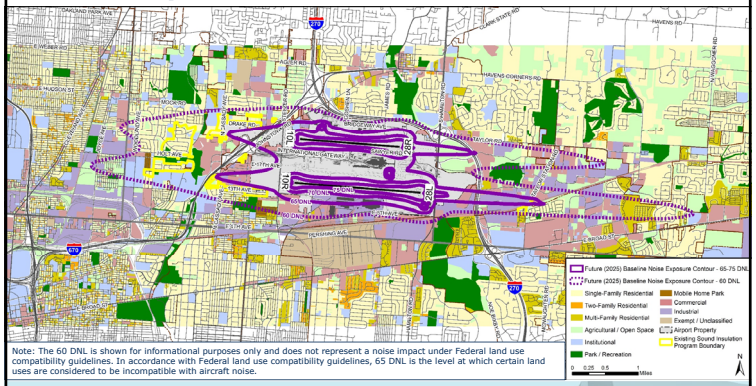
Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Population			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Noise-Sensitive Facilities			
Schools / Daycares	1	0	0

JOHN GLENN INTERNATIONAL

8

8

Future (2025) Baseline Noise Exposure Contour



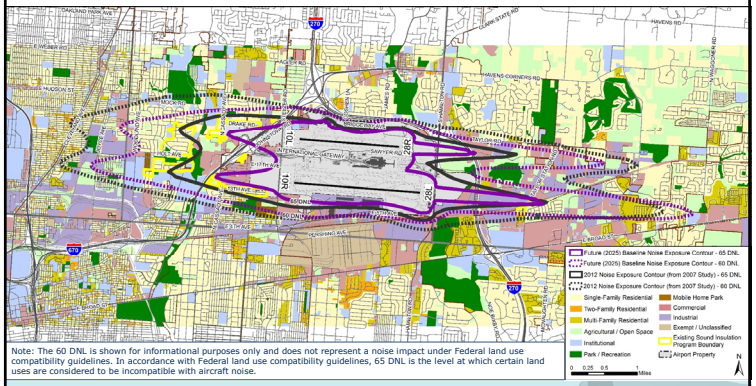
Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

9

9

Future (2025) Baseline Noise Exposure Contour Compared to Future (2012) NCP Contour from 2007 Study



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

10

10

Future (2025) Baseline Noise Exposure Contour

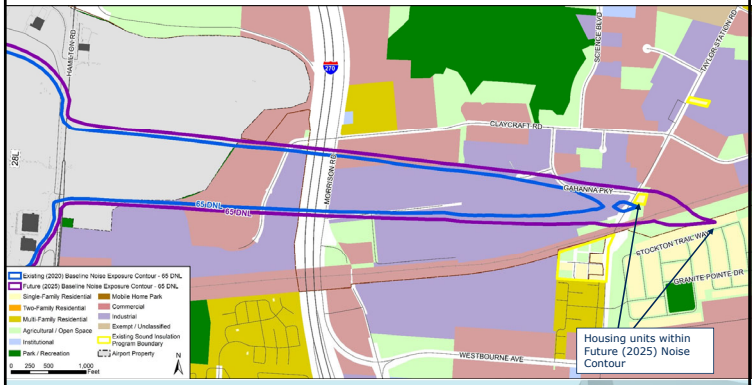
Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	1	0	0
Gahanna	1	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	**2**	**0**	**0**
Population			
Columbus	3	0	0
Gahanna	3	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	**6**	**0**	**0**
Noise-Sensitive Facilities			
Schools / Daycares	1	0	0

JOHN GLENN INTERNATIONAL

11

11

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

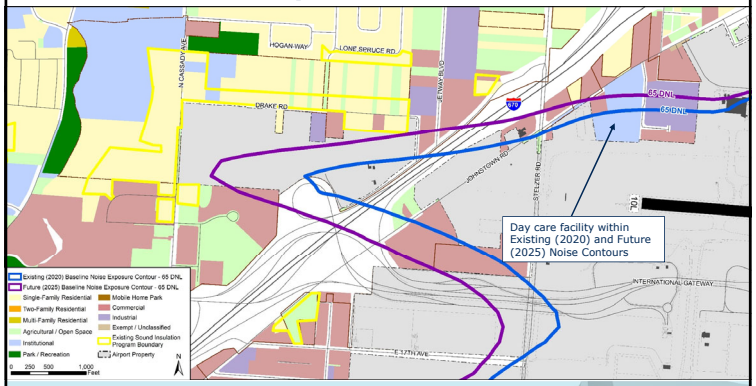


JOHN GLENN INTERNATIONAL

12

12

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



JOHN GLENN INTERNATIONAL

13

13

Noise Compatibility Program

Types of Program Measures

- Noise Abatement Measures
- Land Use Measures
  - Corrective (Remedial) Land Use Measures
  - Preventative Land Use Measures
- Program Management (Implementation) Measures

JOHN GLENN INTERNATIONAL

14

14

Noise Compatibility Program Measures

Noise Abatement Measures

- **NA-1:** Amend the John Glenn Columbus International Airport nighttime maintenance Run-up Policy to designate an additional run-up location north of the airfield for the relocation of the NetJets (EJA) 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 NetJets facility.

  Recommendation: Continue measure

- **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 along I-270.

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

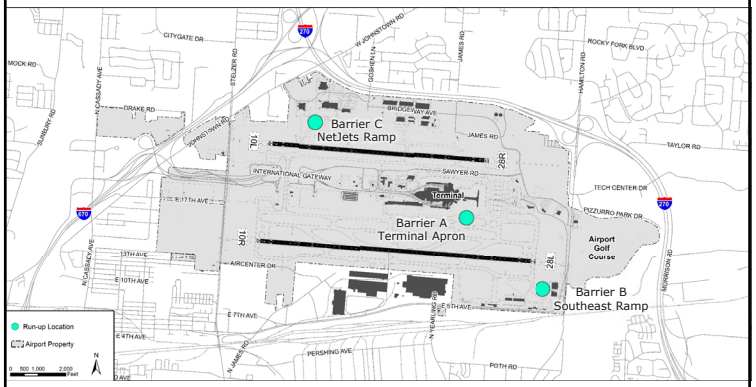
  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL

15

15

Existing Run-up Barrier Locations



JOHN GLENN INTERNATIONAL

16

16

Noise Compatibility Program Measures

Noise Abatement Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 17

17

Noise Compatibility Program Measures

Noise Abatement Measures

- **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.

  Recommendation: Continue measure

- **NA-5:** Measure previously withdrawn

JOHN GLENN INTERNATIONAL 18

18

Noise Compatibility Program Measures

Noise Abatement Measures

- **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.

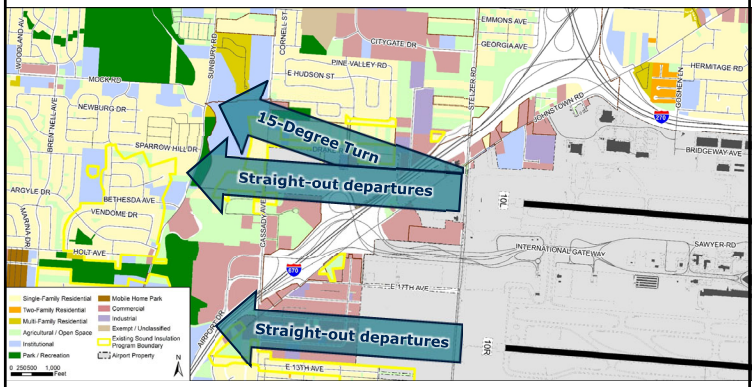
  Status: Implemented – This measure is used when traffic conditions warrant.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 19

19

15-Degree Departure Turn



JOHN GLENN INTERNATIONAL 20

20

Noise Compatibility Program Measures

Noise Abatement Measures

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

  Status: Currently being implemented – RNAV/RNP procedures are being developed independently by the FAA and are expected to be implemented in September 2021.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 21

21

Noise Compatibility Program Measures

Noise Abatement Measures

- **NA-8:** Construct a noise berm/wall.

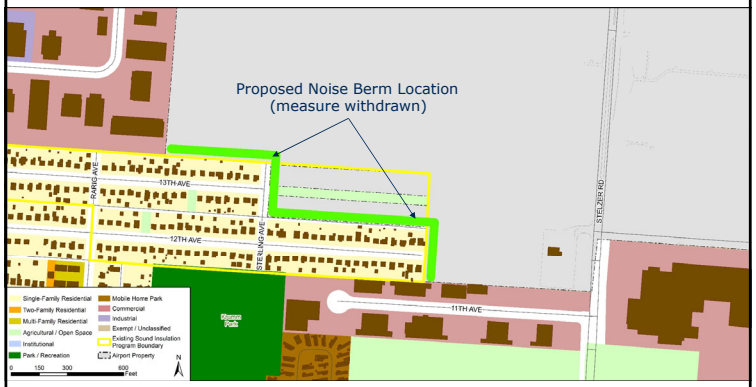
  Status: Not Implemented - This measure was considered for the acquisition area along East 13th Avenue as mitigation for the runway relocation. Further investigation and surveys of property owners determined that a noise berm in the location was not desirable.

  Recommendation: Withdraw measure

JOHN GLENN INTERNATIONAL 22

22

Previously Proposed Noise Berm Location



JOHN GLENN INTERNATIONAL 23

23

Noise Compatibility Program Measures

Noise Abatement Measures

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

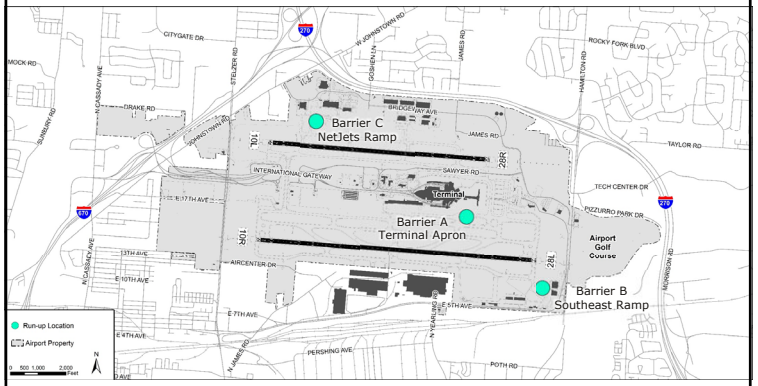
  Status: Not Implemented – Potential replacement and relocation of the Ground Run-Up Barrier B was proposed to accommodate larger aircraft associated with potential new maintenance hangars proposed for the southeast airfield at CMH. The proposed maintenance hangars were not constructed. Therefore, an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

  Recommendation: Continue Measure (if needed)

JOHN GLENN INTERNATIONAL 24

24

Existing Run-up Barrier Locations



JOHN GLENN INTERNATIONAL

25

25

Noise Compatibility Program Measures

Land Use 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.

  Recommendation: Continue measure with modification to update program boundary based upon Future (2025) NCP noise exposure contour from this Part 150 Study.

  Based on the preliminary results of the noise contour modeling, there would be no new residences located within the 65+ DNL program boundary; therefore, no new noise insulation would be offered.

JOHN GLENN INTERNATIONAL

26

26

Noise Compatibility Program Measures

Land Use Measures

- **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.

  Recommendation: Continue measure with modification to update program boundary based upon Future NCP from this Part 150 Study.

  Based on the preliminary results of the noise contour modeling, there would be no churches located within the 65+ DNL program boundary; therefore, no new noise insulation would be offered.

JOHN GLENN INTERNATIONAL

27

27

Noise Compatibility Program Measures

Land Use Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL

28

28

Noise Compatibility Program Measures

Land Use Measures

- **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.

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

  Recommendation: Continue measure based on previously-approved boundary. Use of the fixed boundary that follows existing physical features provides for consistency for land use planning and avoids changing boundaries in the future.

JOHN GLENN INTERNATIONAL 29

29

Noise Compatibility Program Measures

Land Use Measures

- **LU-5:** Seek cooperation from Franklin County to amend the Franklin County Zoning Resolution, Section 660.07, Avigation Easement, to require applicant 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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 30

30

Noise Compatibility Program Measures

Land Use Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 31

31

Noise Compatibility Program Measures

Land Use Measures

- **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: Not implemented – Coordination with local jurisdictions has occurred; however, subdivision regulations have not been updated.

  Recommendation: Continue measure

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 32

32

Noise Compatibility Program Measures

Land Use Measures

- **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).

  Status: 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.

  Recommendation: Continue measure

- **LU-10:** Periodically place advertisements in a variety of media outlets delineating the boundaries of the proposed Airport Land Use Management District (ALUMD).

  Status: Not implemented – The ALUMD has not been adopted. The CRAA makes the noise exposure maps and other noise compatibility information available on its website.

  Recommendation: Continue measure

- **LU-11:** Measure previously withdrawn

JOHN GLENN INTERNATIONAL 33

33

Noise Compatibility Program Measures

Land Use Measures

- **LU-12:** Develop an Airport Land Use Management District (ALUMD) based on the 2023 Noise Exposure Map/Noise Compatibility Program (NCP) noise contour, and other 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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 34

34

Noise Compatibility Program Measures

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.

  Recommendation: Continue measure

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

  Status: Ongoing – The CRAA continues to operate the Noise Management Office to support the efforts to minimize the noise impact of CMH.

  Recommendation: Continue measure

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

  Status: Ongoing – The CRAA maintains public involvement activities, including the 24-hour noise hotline, WebTrak tracking system, and noise monitoring system.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 35

35

Noise Compatibility Program Measures

Program Management Measures

- **PM-4:** Maintain the noise and flight track monitoring system and expand and upgrade the system as necessary. Add four 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.

  Recommendation: Continue measure with modification to remove the recommendation to install additional NMTs since that recommendation is complete.

JOHN GLENN INTERNATIONAL 36

36

Noise Compatibility Program Measures

Program Management Measures

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

  Status: Ongoing.

  Recommendation: Continue measure

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

  Status: Implemented (*Not active at this time*)

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 37

37

Next Steps

- **Public Hearing Tonight – 5:30 to 7:00pm**
  - Comments being accepted through August 13th
  - Project Website: www.airportprojects.net/cmh-part150
- **Late Summer 2021**
  - Review and address public comments
- **Fall 2021**
  - Prepare Final Part 150 Noise Compatibility Program (NCP) Update Report
  - Submit Final NCP Update to FAA for review/approval
- **Spring/Summer 2022**
  - Anticipate FAA Record of Approval

JOHN GLENN INTERNATIONAL 38

38

Comments / Open Discussion

JOHN GLENN INTERNATIONAL 39

39

John Glenn Columbus International Airport
Part 150 Noise Compatibility Update Study

Technical Advisory Committee Meeting 4

Date: Thursday, July 29, 2021
Time: 3:00 to 4:00 PM
Location: Online video conference meeting (using Zoom Meeting for Business)

Meeting Summary

Meeting Purpose

- Review Noise Compatibility Program (NCP) recommendations
- Review schedule and next steps
- To gather input and ask questions about the study

Meeting Summary

Justin Anderson, Columbus Regional Airport Authority (CRAA) Project Manager, welcomed everyone to the final Technical Advisory Committee (TAC) meeting and thanked members for their willingness to participate in this study over the past year and a half. Justin noted that recommended updates to the current Noise Compatibility Program (NCP) were introduced during the last TAC meeting. Justin mentioned that the Study Team did not receive many comments on the recommended NCP measures. He noted this was expected due to the shrinking noise corridors at John Glenn Columbus International Airport (CMH). The goal of this meeting was to provide TAC members one final opportunity to review the noise compatibility measures before the final draft of the Part 150 Noise Study is submitted to the Federal Aviation Administration (FAA). Before turning the presentation over, Justin introduced the rest of today's meeting panelists; Mark Kelby, Airport Planner with CRAA; Chris Sandfoss, Project Manager with Landrum & Brown; and Marie Keister, Public Engagement Lead and Meeting Facilitator with Engage Public Affairs/MurphyEpson.

Marie Keister provided a brief overview of meeting logistics, how to ask questions using the video software and an overview of the meeting agenda. Justin then gave a brief update of current events at CMH. His report noted a steady increase of passenger traffic since the spring and noted new and returning airline service at CMH. Justin also briefly gave an overview of the Master Plan for CMH and its ongoing infrastructure improvements before turning over the presentation to Chris Sandfoss.

Chris Sandfoss reviewed the project study process, existing and future baseline noise exposure contour mapping and NCP measures status and recommendations. He also reviewed the next steps reminded everyone about the virtual public meeting/hearing being held later in the evening, noting that public comments are

being accepted for the draft noise compatibility program during the public hearing (July 29) and via email and US mail through August 13, 2021. A brief recap of this TAC meeting and presentation will be made available online (through the project website: https://www.airportprojects.net/cmh-part150/).

Justin again thanks the TAC and team for their efforts, noting the goal of CRAA to continue to have a healthy relationship with the local entities and the public that they serve.

Questions

A list of questions, comments and responses from the entire meeting is noted in the section below.

Rory McGuiness (City of Columbus) *asked which of the impacted facilities is located in Columbus?*

Justin Anderson (CRAA) *asked Rory to elaborate on his question and if he was referring to the daycare facility just north of CMH?*

Rory McGuiness (City of Columbus) *noted he was interested in the one residential facility noted in the chart and map.*

Chris Sandfoss (L&B) *pointed out the property on project mapping located on Taylor Station Road in the Waterfront Park Subdivision.*

Rory McGuiness (City of Columbus) *asked for clarification if it was noted previously in the presentation that the subject property had already been mitigated in the past for noise?*

Chris Sandfoss (L&B) *noted the subject property was constructed in the mid to late 2000s after the airport had published its 2007 noise study and not considered eligible for noise abatement based on FAA guidelines.*

Marie Keister (Engage Public Affairs) *asked the project team a related question regarding homeowner obligations if a home is built in an area where there is a published noise exposure contour. Who is responsible? The owner, realtor, and/or airport?*

Chris Sandfoss (L&B) and Justin Anderson (CRAA) *noted that the CRAA works with the City of Columbus to review proposals for new development within the noise contour. This review includes recommendations for disclosure notices on the deed and that the builder/developer use sound attenuation construction techniques during the construction of noise-sensitive uses.*

Mark Kelby (CRAA) *stated that realtors really are under no obligation to disclose the noise footprint, so it really is up to the buyer to be aware of what is in their surroundings.*

Tony Celebreeze (City of Columbus) *asked if there's anything in the state building codes that we all adhere to that address airport noise mitigation?*

Chris Sandfoss (L&B) *stated that he doesn't believe there's anything specific to airport noise attenuation, but we can look into that.*

Justin Anderson (CRAA) *noted he's not familiar with anything specific that needs addressed. He mentioned on the state-level it pertains more to airspace and airport protection with tall structures around the airport, but not in terms of building codes specifically.*

Tony Celebreeze (City of Columbus) *noted he just wanted to make sure the City is working with CRAA to mitigate any potential issues and at the same time allowing property owners their right to develop a parcel.*

Justin Anderson (CRAA) *mentioned they could look into that further.*

Meeting Participants

Ben Kessler	*City of Bexley*
Tony Celebrezze	*City of Columbus*
De Lana Scales	*City of Columbus*
Rory McGuiness	*City of Columbus*
Michael Blackford	*City of Gahanna*
Kamran Khorshidi	*City of Reynoldsburg*
Danny Adams	*Columbus Regional Airport Authority*
Justin Anderson	*Columbus Regional Airport Authority*
Luke Curtis	*Columbus Regional Airport Authority*
Matt DeCubellis	*Columbus Regional Airport Authority*
Kristen Easterday	*Columbus Regional Airport Authority*
Joe Hermann	*Columbus Regional Airport Authority*
Mark Kelby	*Columbus Regional Airport Authority*
Benjamin Kirtley	*Columbus Regional Airport Authority*
Tom McCarthy	*Columbus Regional Airport Authority*
Sarah McQuaide	*Columbus Regional Airport Authority*
Brian Sarkis	*Columbus Regional Airport Authority*
Betsy Taylor	*Columbus Regional Airport Authority*
Robert Gesterling	*Delta Airlines*
Marie Keister	*Engage Public Affairs*
Katherine Delaney	*FAA – Detroit Airports District Office*
Rob Adams	*Landrum & Brown, Inc.*
Jesse Baker	*Landrum & Brown, Inc.*
Chris Sandfoss	*Landrum & Brown, Inc.*
Nick Hoffman	*MurphyEpson Inc.*
Brittany Davies	*National Business Aviation Association*
Artie Clark	*NetJets*

This page intentionally left blank

Public Information Meeting #1
April 8 & 9, 2020

This meeting was cancelled due to the COVID-19 outbreak and information was posted online.

Online Project Summary Handout

Online Display Boards

This page intentionally left blank

John Glenn Columbus International Airport
Part 150 Noise Compatibility Study
Project Factsheet

What is a Part 150 Noise Compatibility Study?

The study gets its name from Part 150 of the Code of Federal Regulations, which provides guidance for airports choosing to prepare a Noise Compatibility Study. The purpose for conducting a Part 150 Study is to develop a balanced and cost-effective plan for reducing current noise impacts from airport operations, where practical, and to limit additional impacts in the future. There are two technical components to the study process. The first component is to develop the Noise Exposure Maps (NEMs) and the second is to develop a Noise Compatibility Program (NCP). The Columbus Regional Airport Authority (CRAA) periodically reviews and updates NEMs and NCP for the John Glenn Columbus International Airport (CMH) in order to further the goal of being a good neighbor to the surrounding communities.

Noise Exposure Maps (NEMs)

NEMs are the official noise contours for the Airport and are prepared for an existing condition and for a five-year future condition. The NEMs must be prepared according to Federal Aviation Administration (FAA) Part 150 guidelines in regards to methodology, noise metrics, identification of incompatible land uses, and public outreach. NEMs graphically show where significant levels of annual average noise exposure on incompatible land uses around the airport are anticipated.

Noise Compatibility Program (NCP)

The NCP sets forth measures intended to reduce or mitigate the impacts of noise exposure on land uses that are considered by the FAA as incompatible with significant levels of aircraft noise. Levels of significance are identified in the Code of Federal Regulations. Examples of land uses that may be incompatible with aircraft noise include: housing, schools, places of worship, libraries, hospitals, and nursing homes.

Previous and Ongoing Noise Compatibility Planning at CMH

There is a long history of noise compatibility planning at CMH. The first Noise Compatibility Study was conducted in 1987 and was updated in 1993, 1999, and 2007. In the 2007 update, the NEMs were updated to reflect the current noise exposure levels and new NCP recommendations were developed to mitigate noise impacts resulting from the relocation of the south runway (Runway 10R/28L). Mitigation efforts included a residential sound insulation program. To date, the CRAA has provided sound insulation for nearly 800 residences. In addition, the CRAA works with local jurisdictions to plan for compatible land use development around the Airport. The CRAA also maintains a Noise Program Office to provide information and address public inquiries about airport operations and noise compatibility.

JOHN GLENN INTERNATIONAL

John Glenn Columbus International Airport
Part 150 Noise Compatibility Study
Project Factsheet

Progress to Date

Since this Part 150 Study began in the Fall 2019, the study has concentrated on data collection and the development of preliminary noise contours for the existing condition (2020) and the five-year future condition (2025). The following lists the major tasks completed for this Study to date:

- Held kickoff meeting with Technical Advisory Committee
- Compiled and evaluated radar flight track and noise monitoring data
- Conducted field noise measurements (week of November 10th, 2019)
- Prepared preliminary existing (2020) and future (2020) baseline noise contours

Technical Advisory Committee

A Technical Advisory Committee (TAC) was established for this Part 150 Noise Compatibility Study to provide input into the process and review results and recommendations. The TAC is comprised of various stakeholders, including Airport Officials, FAA Air Traffic Controllers, Airport Users, Government Officials, and local Community Groups. Several meetings of the TAC are planned throughout the Study.

Public Participation

The Noise Compatibility Study process is designed to encourage the public to comment on the study process and findings. Public information workshops will be held throughout the Part 150 Study at key points. Due to recommended precautions to stop the spread of COVID-19, the first set of public meetings scheduled for April 8th and April 9th, 2020 were converted from in person meetings to an online open house. All meeting materials are posted online and comments and questions may be submitted through the website at www.airportprojects.net/cmh-part150.

Information available on the website includes several graphics that provide additional technical information on the development of the NEMs and the Preliminary Draft Noise Exposure Contours.

Next Steps

Additional opportunities for public review and comment are planned during the course of the Study. Comments are being accepted on the information presented on the website through May 31st, including comments on the Preliminary Draft Noise Exposure Contours. Once comments are received and addressed, a Draft set of NEMs and a Draft NCP will be published for public review, and a Public Hearing will be conducted. Following that Public Hearing, any additional comments will be addressed and the Draft NEMs and NCP will be submitted to the FAA for review. Once the NEMs are accepted by the FAA, they will become the official NEMs for CMH.

Part 150 Process

1

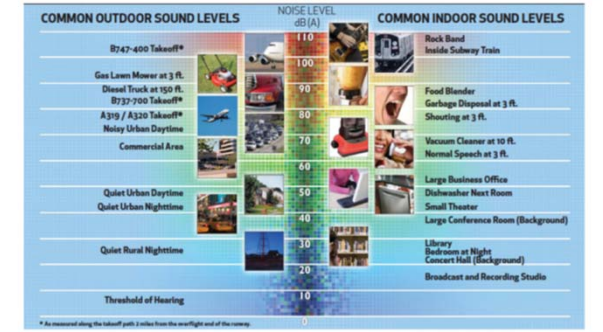
Land Use / Noise Sensitivity Matrix

2

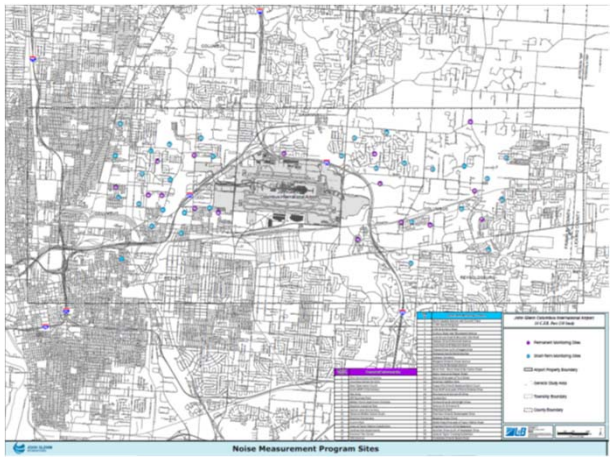
How Noise Contours are Generated

3

Comparison of Noise Levels



4



5

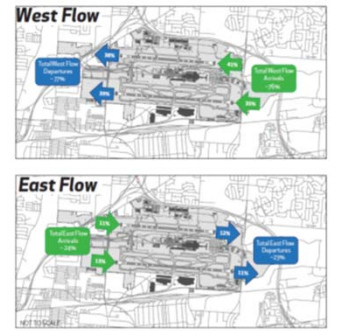
2020 Operation Levels and Fleet Mix

6

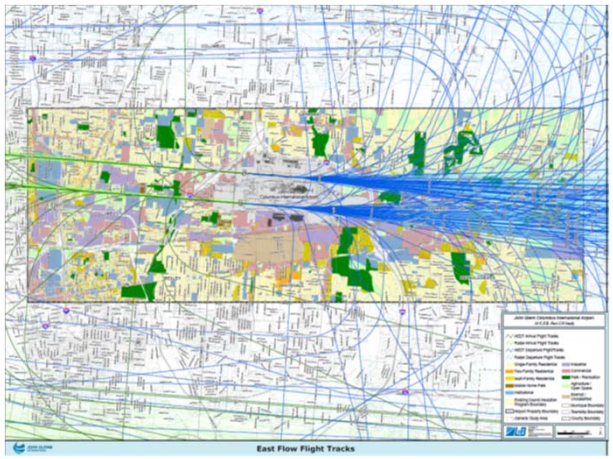
2025 Operation Levels and Fleet Mix

7

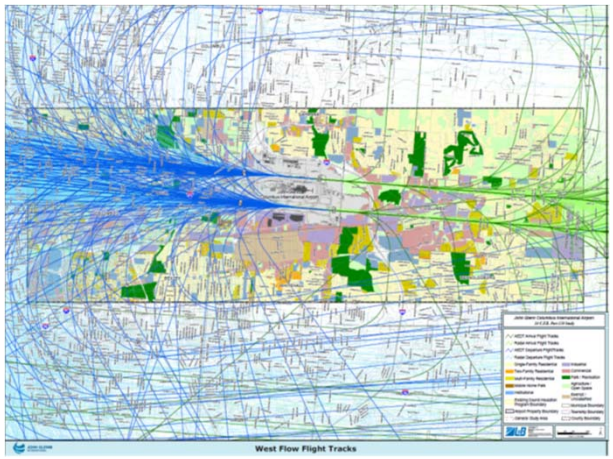
Runway End Utilization



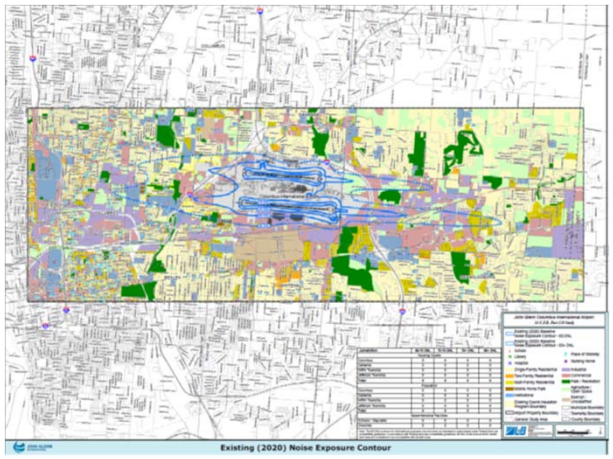
8


East Flow Flight Tracks

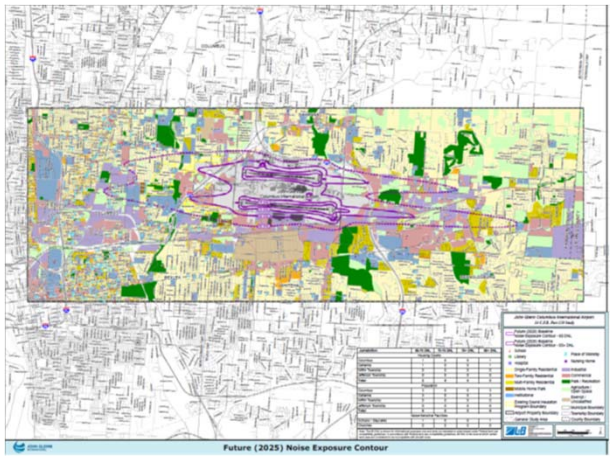
9


West Flow Flight Tracks

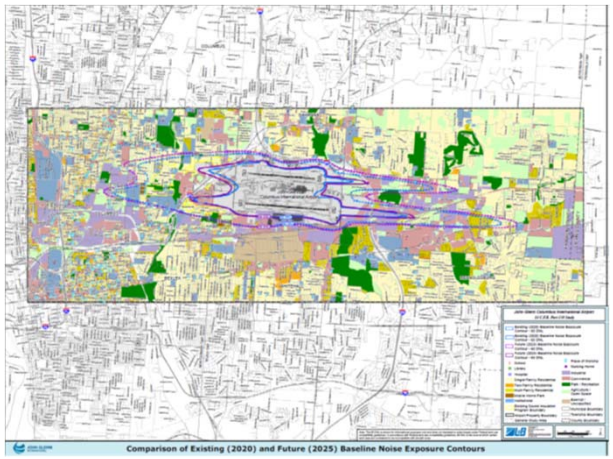
10


Existing (2020) Noise Exposure Contour

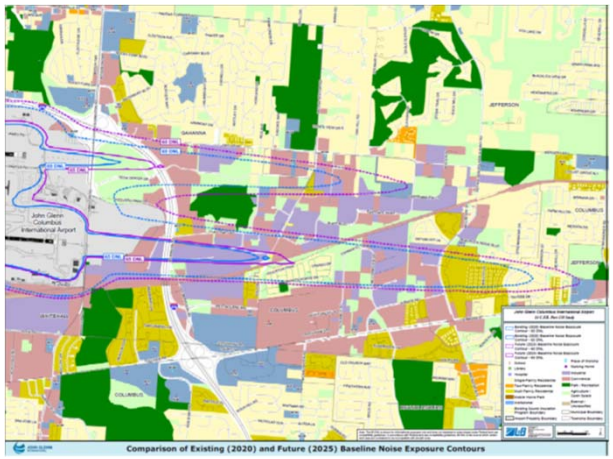
11


Future (2025) Noise Exposure Contour

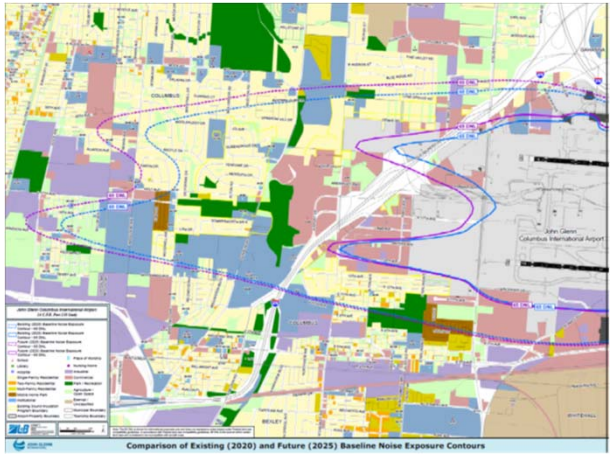
12



13



14



15

Comparison of Noise Contour Areas and Land Use Impacts

CONTOUR RANGE	AREA IN SQUARE MILES		
	2012 NEM/NCP (from 2007 Part 150 Study)	EXISTING (2020) BASELINE	FUTURE (2025) BASELINE
65-70 DNL	3.1	1.8	2.2
70-75 DNL	1.1	0.5	0.6
75+ DNL	1.1	0.4	0.5
65+ DNL	5.3	2.7	3.3
HOUSING UNITS			
65-70 DNL	473	0	2
70-75 DNL	0	0	0
75+ DNL	0	0	0
65+ DNL	473	0	2
POPULATION			
65-70 DNL	1,168	0	6
70-75 DNL	0	0	0
75+ DNL	0	0	0
65+ DNL	1,168	0	6

16

Public Information Meeting #2
September 2, 2020

Newspaper Notices

Online Presentation

Meeting Transcript

This page intentionally left blank

Ohio Dems: 'Don't mess with the USPS'

Randy Ludlow
The Columbus Dispatch | USA TODAY NETWORK

The steady arrival of masked patrons at the Oakland Park post office seemed to underline the points made by Joyce Beatty and others as they stood outside the entrance.

The U.S. Postal Service, they said, is a lifeline — a lifeline for the delivery of life-sustaining medications, correspondence from loved ones and perhaps a check to fix a car so a person in need can get to work.

But mail service also is a lifeline connecting people to their democracy through their right to vote, said the congresswoman and other Columbus Democrats.

They gathered at the post office Tuesday to denounce what they portrayed as deliberate moves by the administration of Republican President Donald Trump to suppress voting by mail ahead of the Nov. 3 election by slowing the machinery of the postal service.

"These are baseless and senseless attacks on the postal service," Beatty said at the news conference dubbed #DontMessWithUSPS. "We know they are doing this to have an effect on this election."

She vowed to return to Washington D.C. to fight for funding for the U.S. Postal Service to help ensure it can promptly handle mail involving absentee requests and mail ballots in the weeks before the fall election.

Rep. Joyce Beatty demands the White House stop interfering with the United States Postal Service during a news conference outside the Oakland Park Station of the USPS in Columbus on Tuesday. [ADAM CAIRNS/DISPATCH]

"They cannot delay our democracy," Beatty said. "This is about delaying your vote."

Franklin County Commissioner John O'Grady followed up to call Trump's defense of postal service changes as "lying and cheating."

"It's a manufactured crisis trying to foster doubt on election results" since Trump fears losing and wants to stay in power, O'Grady said.

Columbus City Council President Shannon Hardin agreed: "We know what this about: voter suppression."

Democrats claim Trump is undermining the U.S. Postal Service ahead of the Nov. 3 election in a bid to bolster his chances of re-election by suppressing mail ballots more often cast by Democrats.

The postal service warned Ohio and other states that absentee ballot requests and returned mail-in ballots submitted too close to the election may not be delivered in time to be counted.

With the COVID-19 pandemic expecting to cause many to shy away from in-person voting, a record number of mail ballots are expected to be submitted this fall, including in Ohio.

Despite no evidence, Trump claims mail balloting is rife with fraud, saying Monday that the only way he can lose this fall is if the election is "rigged," which might require another election. A struggle over post office funding is mounting in Congress.

Most of Beatty's Republican colleagues in Congress, in a joint letter, are asking the postal service to "implement procedures, in coordination with the state of Ohio, to ensure the timely and accurate delivery of election-related materials prior to the November elections."

U.S. Sen. Rob Portman joined U.S. Reps. Steve Stivers of Columbus and Troy Balderson of Zanesville in signing the letter.

Democrats led by U.S. Sen. Sherrod Brown are urging Republican Secretary of State Frank LaRose, meanwhile, to reconsider his decision permitting only one absentee ballot drop box in each county.

rludlow@dispatch.com
@RandyLudlow

LaRose to ask for $3 million to pay ballot postage

Rick Rouan
The Columbus Dispatch | USA TODAY NETWORK

Ohio Secretary of State Frank LaRose wants to use revenue from state business filings to pay for postage on absentee ballots.

The Republican secretary of state said in a news release Tuesday afternoon that he would ask the GOP-controlled state Controlling Board, which approves major spending proposals, for permission to use up to $3 million from the fund to pay for return postage.

LaRose had asked the Ohio General Assembly to allow him to use general revenue fund dollars to pay for postage. A bill passed in the Ohio House would have barred LaRose from paying for postage, but it has not passed the Ohio Senate.

Last week, LaRose said he still supported the idea of paying for postage on absentee ballots but needed additional action from lawmakers. The controlling board controls changes to the state budget and is made up mostly of state lawmakers.

"If the controlling board approves our request, they will effectively be making every mail box a drop box for millions of Ohioans, making it easier than ever to cast a ballot in a general election," LaRose said in a prepared statement. "No state (general revenue fund) or federal funds will be used to pay for it; instead we're ready to take it out of my office's own budget to get it done."

Last week, LaRose issued a directive to 88 county boards of elections telling them that they could use only one drop box, the one required in the 2020 primary conducted mostly by mail, for absentee ballots.

Democrats have lambasted LaRose over the decision, saying he was suppressing the vote by not allowing boards to expand the use of drop boxes while the U.S. Postal Service was warning him of slowdowns in mail service that could prevent ballots from being counted.

Sen. Sherrod Brown went as far as to accuse LaRose of doing the bidding of President Donald Trump, a critic of voting by mail.

LaRose made that decision after waiting weeks for a legal determination on his authority from Ohio Attorney General Dave Yost. LaRose withdrew his request for the legal opinion the day before issuing the directive, but Yost's office said it expected to issue the opinion that week.

Rep. Bride Rose Sweeney, a Cleveland Democrat who has worked on several elections bills, said she is encouraged that LaRose is willing to pay for postage but questioned why he would not use federal coronavirus relief funding that his office has received to pay for the effort.

Democrats contend LaRose already had authority from the Controlling Board to spend CARES Act funding on postage.

"He has made a decision to not allow boards of elections to expand their drop boxes. He keeps saying every blue box is like a drop box. That's only true if you pay for postage," she said.

More information about requesting an absentee ballot is available at https://www.ohiosos.gov/elections/voters/absentee-voting/.

rrouan@dispatch.com
@RickRouan

VIRTUAL
PUBLIC
MEETING

Learn about the John Glenn Columbus International Airport Part 150 Noise Compatibility Study

Wednesday, September 2, 2020
5 to 7 PM

Pre-registration required.

Register and send questions in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings/

If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact the Project Team at 513.818.0626 by August 26.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

Learn more at www.airportprojects.net/cmh-part150/

At 'luncheon,' Dems pin Ohio's problems on GOP

Rick Rouan
The Columbus Dispatch | USA TODAY NETWORK

Ohio Democrats are putting the blame for problems that plague the state squarely on the shoulders of Republicans who have ruled Ohio for most of the past several decades.

During a lunch-hour video conference with the party's presidential delegates, elected officials and party leaders blamed President Donald Trump for the pandemic and economic crisis, highlighted the Statehouse corruption scandal that has ensnared former Ohio House Speaker Larry Householder and GOP lobbyist Neal Clark, and slammed Ohio Secretary of State Frank LaRose for his decision to allow only one absentee ballot drop box in each county.

And, yes, they gave their solution for fixing the problems: Elect Democrats.

"We have to build back better. We need to turn Ohio blue because election day starts today. Every day from this day forward is election day," said U.S. Rep. Marcia Fudge of Cleveland. "We cannot wait until the last minute to make change. Change is who we are because we are the people's party."

Democrats have struggled in statewide elections during the last several cycles. Trump won Ohio by 8 percentage points in 2016. Republicans cleaned up in statewide non-judicial offices in 2018. Sen. Sherrod Brown's 7-point victory was an outlier for the party two years ago.

"They have had 25 years of a culture of corruption in this state," Brown said.

Brown asked the delegates to find people in their lives who likely wouldn't vote and to help educate them on the issues and how to vote. He blamed Republicans for inadequate school funding and inequitable tax policies, and he put the burden of the 170,000 who have died in the COVID-19 outbreak in the U.S. on Trump.

"When we win Ohio for Biden, and Harris it's going to mean an electoral college landslide. When we win Ohio it means we'll win Pennsylvania, Michigan and Wisconsin," he said.

The daily digital lunch gathering is the party's substitute for the breakfast meetings it would have at an in-person convention. Those have drawn a national cast of political speakers in the past.

They also have acted as a springboard for officeholders who are looking to run statewide campaigns two years later to introduce themselves to delegates around the state.

On Tuesday, Columbus City Attorney Zach Klein reassured the delegates that they have a chance to make changes at the ballot box. His remarks straddled both personal introduction and political rally for Democrats on the 2020 ballot.

He lamented what he said was Trump's "fanning the flames of divisions" and other failures while highlighting legal actions his office has taken to preserve city gun regulations and to fight the Trump administration on changes to the Affordable Care Act.

"It's like all the gains we made under President Obama and Vice President Biden are being squandered. I want you to know right now that hope is not lost," he said.

Klein and Dayton Mayor Nan Whaley, co-sponsors of the Tuesday lunch, both are seen as potential Democratic candidates to run for statewide elected office in 2022.

Recounting her experience leading a city through a mass shooting last summer, Whaley blamed Republicans for failing to act on gun control measures. After nine people were killed in Dayton a day after 23 died in a shooting in El Paso, Whaley said she was hopeful that change would follow.

So far, though, no action has been taken. Whaley called Gov. Mike DeWine's plan, which received a lukewarm reception in the Republican-controlled Ohio General Assembly, a "watered down" proposal.

rrouan@dispatch.com
@RickRouan

STATE OF OHIO NOTARIAL SEAL
VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023
Veronica Hill

Leaf Filter GUTTER PROTECTION
INSTALLS ON NEW & EXISTING GUTTERS
BEFORE LeafFilter
AFTER LeafFilter
15% OFF PURCHASE* AND 10% OFF SENIOR & MILITARY DISCOUNTS 5% OFF TO THE FIRST 50 CALLERS!**
Promo Number: 285
CALL US TODAY FOR A FREE ESTIMATE 1-877-270-8386
*For those who qualify. One coupon per household. No obligation estimate valid for 1 year. ** Offer valid at estimate only.

WORSHIP DIRECTORY

Advertising Information

We invite you to share your Services, Programs and Special Events with the community each week in the Friday edition of The Columbus Dispatch and ThisWeek Community Newspapers.
For more information or to place your Worship Services ad please call:

Sherry Blissenbach
614-583-5797
or email
sblissenbach@dispatch.com

Deadlines:
12 Noon Wednesday

New Albany resident Parker Smith, then 14, competes in Bexley's Splish, Splash & Dash Youth Triathlon in August 2017. This year's event will take a different form because of the COVID-19 coronavirus pandemic, according to Bexley Recreation and Parks Department officials. Rather than taking place on one day in one mass gathering, the 2020 event encourages participants to bicycle, swim or run on their own from Saturday, Aug. 22, to Sept. 22.
PAUL VERNON/THISWEEK

TRIATHLON

FROM >> A1

being offered virtually or in outdoor spaces at Jeffrey Mansion, 165 N. Parkview Ave., that accommodate social distancing, Mullin said.

"Anything has to be either online or outdoors," she said. "We've completely moved away from indoor spaces."

Sports leagues, such as flag football, have been postponed, replaced by online instruction in those activities, Mullin said.

"We've made changes, and I think they're for the positive," she said. "We trying to encourage people to stay active."

For more information and registration, go to bexley.org/ssd. For more information and registration for other activities, go to bexley.org/recreation-parks.

editorial@thisweeknews.com
@ThisWeekNews

DIVERSITY

FROM >> A1

entities, especially after the murder of George Floyd, we have to remember that race is not the only attribute that is cause for discrimination and bias," Ellyson said. "The amendments in Bexley's strategic plan take steps to be more inclusive of all in our community, as well as our neighboring communities and anyone who passes through our city."

editorial@thisweeknews.com
@ThisWeekNews

CAPITAL

FROM >> A3

The university will not permit university-related or international travel, including study-abroad programs. Nonessential university-related domestic travel also has been suspended, including recruiting and athletics travel. Athletics competitions have been suspended, but training and use of campus workout facilities will be permitted with state, local and U.S. Centers for Disease Control and Prevention guidelines under Capital's plan.

"All the fall sports have been postponed to spring," Kaufman said. "We're looking at engagement activities with the athletes."

Music programs and other extracurricular activities will be permitted, with safety precautions in place, Kaufman said. Students may opt to complete the entire academic year virtually, and instructors have undergone professional development over the summer to enhance online learning, he said.

"We hope that the virtual or online experience will be as good or even better than in person," he said.

For more information on Capital's reopening plan, go to capital.edu.

editorial@thisweeknews.com
@ThisWeekNews

VIRTUAL PUBLIC MEETING

Learn about the John Glenn Columbus International Airport Part 150 Noise Compatibility Study

Wednesday, September 2, 2020
5 to 7 PM

Pre-registration required.
Register and send questions in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings/

If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact the Project Team at 513.818.0626 by August 26.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

Learn more at www.airportprojects.net/cmh-part150/

ESTATE SALE - LOG HOMES
PAY THE BALANCE OWED ONLY!!!
AMERICAN LOG HOMES IS ASSISTING JUST RELEASED ESTATE & ACCOUNT SETTLEMENT ON HOUSES.
4 Log Home kits selling for BALANCE OWED, FREE DELIVERY
1) Model # 1911 Carolina $49,500...BALANCE OWED $17,000
2) Model # 2205 Georgia $49,500...BALANCE OWED $19,950
3) Model # 1905 Biltmore $39,995...BALANCE OWED $14,500
4) Model # 1405 Augusta $42,495...BALANCE OWED $16,500
BEFORE CALLING: VIEW at www.loghomedream.com Click on House Plans
NEW - HOMES HAVE NOT BEEN MANUFACTURED
• Make any plan design changes you desire!
• Comes with Complete Building Blueprints & Construction Manual
• Windows, Doors, and Roofing not included
• NO TIME LIMIT FOR DELIVERY!
BBB A+ Rating
OFFER NOT AVAILABLE TO AMERICAN LOG HOME DEALERS
SERIOUS ONLY REPLY. Call (704) 602-3035 ask for Accounting Dept.

Community headlines delivered weekly to your inbox.
Sign up today
ThisWeekNEWS.com

TOP REAL ESTATE DEALS THIS WEEK

Which area of central Ohio has the hottest real estate market right now? How much did that house sell for down the street? How much are homes in your community compared to homes across town? You'll find the answers to those questions in ThisWeek's exclusive Top Real Estate Deals This Week. This list is a compilation of the week's top home and condominium transactions for a given week. All sales occurred within the ThisWeek circulation area.

Listed here is the address of the property sold, compiled by the Columbus Dispatch.

Delaware

1413 Haverhill Ct; $699,900; Austin Malcolm Anthony & Ashley Heidi
4708 Hyatts Rd; $485,000; Kearl Leonard C
1525 State Route 203; $480,000; Boehme Kathryn G & Benjamin
294 Trace Dr; $450,000; Parker Andrew & Chelsea
914 Farmington Ln; $450,000; Visampalli Chamundeswari Hanks & Chandrashekar Kala
412 Braumiller Crossing Dr; $419,000; Leroy Kristin J & Jennifer M

Dublin

5953 Trafalgar Ct; $715,000; Hermanis Michael R & Lorenz Lindsey
6651 Bancroft Ln; $557,500; Brust Matthew R & Brust Rachel C
7370 Linden Ln; $540,000; Maurer Bruce & Maurer Mary
5799 Creighton Dr; $500,000; Barrick R Kirby & Barrick Susan K
7913 Wiltshire Dr; $387,000; Wilson Richard J & Wilson Tracy R
9982 Allen Dr; $1,150,000; Justice Kevin & Leandra
7644 Tillinghast Dr; $880,000; Austin Adrienne J
5510 Stansbury Dr; $845,000; Pope Amanda & Patrick
10761 Dunraven Ln; $582,515; Midgley Charles Andrew & Jette
6449 Martin Pl; $556,125; Galleti Anthony & Galleti Robin
7697 Heatherwood Ln; $469,800; Mancher Nirupa & Rajagopal Manoj
4992 Crosshaven Ln; $446,500; Hotsinpiller Andrew Jr & Kotsiantis Elizabeth Bricker
8805 Dublin Rd; $446,000; Meng Rui & Huang Bowen
6698 Cooperstone Dr; $415,000; Mittal Pranshu

Galena

5368 Red Bank Rd; $735,000; Ryan Thomas S & Lynette
5346 Red Bank Rd; $712,000; Griffiths Mary Lou
5125 Nash Ct; $640,000; Pasbell Louis John & Emily J
5576 Plumb Rd; $475,000; Brown Erica M & Meinhart John M
7505 Kenfield Dr; $458,000; Hildebrand Erin & Adam

Hilliard

6590 Marshview Dr; $624,777; Heldarman Michael B & Heldarman Amy
6185 Heritage Lakes Dr; $520,000; Kingsland Wyatt A
4618 Carrington Way; $465,000; Koical Andrew & Koical Ashley R
5890 Morganwood Sq; $450,000; Lykins Gary & Lykins Molly
4121 Greenbelt Dr; $398,500; Jones Reginald & Jones Sherry D
2661 Bayshore Ct; $473,500; Van Daele David & Heather Asv

Lewis Center

3357 Farmers Delight Dr; $469,915; Bergfeld Eric J & Stephanie M
2960 Waterford Dr; $475,000; Walls Ramon C & Leslie D
3426 Pleasant Colony Dr; $412,500; Abbas Syed Mazahir & Shah J Tabinda
5964 Windward Ct; $390,000; Armstrong Scott P & Chrystal

New Albany

7518 Ogden Woods St; $885,000; Higgins Michelle & Higgins John
41 Keswick Woods; $665,000; Zimmerman Steven D & Zimmerman Elizabeth G
7437 Ratchford Ct; $620,000; Higginbotham Carl N Jr & Higginbotham Sonya L
7087 Fernridge Dr; $525,000; Chemyak Danil V & Chemyak Amanda L

Powell

3860 Goldwater Loop; $650,000; Swords Tracy & Kevin
136 Cressingham Ln; $623,000; Hostnik Eric T & Laura Dunbar
411 Shale Ridge Ct; $575,000; Nore Evan J & Rebecca A
475 Woodard Pl; $502,000; Sevart Gregg & Lauren
8429 Maple Leaf Ct; $485,000; Wheeling Robert H Trustee
4625 Cascade Dr; $465,000; Purcell Michael A & Molly C
387 Vinwood Ln; $451,000; Morse Trevor D & Erica M
4175 Daylily Dr; $435,000; Sheel Prashant & Goorha Anvita
4167 Daylily Dr; $433,000; Dasal Pramodh & Chellaronda Sai Haritha
4744 Stone View Ct; $414,900; Miles Kristen M & Ritze Brandon M
3439 Windy Forest Ln; $400,000; Lombardi Matthew & Brenda A
4181 Bishopsgate Way; $395,000; Trout Nancy B
7408 Avendale Dr; $385,000; Boltz Karyn C

Westerville

447 Buckhorn Ct; $585,000; Donovan Ryan S & Donovan Jessica A
6083 Gainey Ct; $475,000; Barker Michael Edward & Linda Phuong Thanh
6004 Misty Point Ct; $450,000; Buslick Heather N & Patrick G
5414 Arecibo Ct; $412,000; Humbert Brett & Brittany
5788 Granby St; $409,000; Cook Margaret M & Womble Derek C
611 W South St; $360,000; Yee Helen H
6000 E Alloway St; $435,000; Gopalakrishna Veena
5797 Pioneers Ct; $397,000; Gilliam Catherine

Grove City

2664 Lori'S Wy; $427,940; Zeng Qiang & Li Jia
5395 Lambert Rd; $410,000; Speelman Thomas M & Speelman Susan D
Pickerington507 Ludham Trl; $405,000; Dsilla Anselou
12359 Rainbee Ave Nw; $399,900; Padgett Melanie

Columbus

957 Neil Av; $960,000; Awais Mazen & Kanz Anvita
34 - 36 W Fourth Av; $701,000; 34-36 W 4Th Ave Llc
976 Neil Av; $649,000; Prestidge Melanie
119 S Ohio Av; $460,000; Enoun Matthew Carl & Enoun Jourdan Marie
889 Dennison Av; $439,999; Keller Stuart Alan & Britt Molly Mcclure

Gemea Village

494 E Whittier St; $425,000; Craynalic Emma & Yarmouth Zachary

Bexley

2498 Fair Av; $720,000; Berger Kyle
2833 Elm Av; $625,000; Henley Jordan
3095 Dale Av; $470,000; Molner Jason P & Molner Adrienne M
200 S Chesterfield Rd; $385,000; Ference James

Grandview

1645 Andover Rd; $572,500; E & E Collective Llc
1967 West Fifth Av; $393,000; Kalbunde Nathan & Kalbunde Bevin M

Clintonville/Beechwold

138 Arden Rd; $458,000; Glimcher Brandon
130 E Scheyer Pl; $428,000; Donnelly Sean T & Donnelly Laura
185 Sheffield Rd; $385,000; Blood Sean E & Decker Lauren M

Upper Arlington

2185 Sherringham Rd; $900,000; Tozbilian Gary H & Tozbilian Stephanie K
4130 Edgehill Dr; $699,900; Pathak Pareq & Pathak Anagha
3725 Seaford Dr; $660,000; Runge Thomas M & Runge Kimberly A W
4901 Woodbridge Rd; $605,000; Sommers Richard W(J)
2498 Danvers Ct; $555,000; Merchant Owen & Kennedy Jean
2340 Middlesex Rd; $479,000; Berger Nicole & Berger Nicholas V
2076 Arlington Av; $628,000; Ballagecon Justin

Gahanna

650 Havens Corners Rd; $400,000; Garman Lucas J

Northwest Side

7530 Ravens Nest Ct; $550,000; Vigilano Robert & Vigilano Dawn
1306 Haran Av; $435,040; Miller Jennifer Anne & Miller Quinn G
1165 Bluffway Dr; $434,500; Grossman Andrew S Trustee
842 Skylark Ln; $400,000; Travis Marc A & Tarlton Tara D

MIKE SHACKETT
(614) 470-7171
Licensed and Selling Real Estate Since 1972
Service you can depend on...
Experience you can trust!
RE/MAX Town Center

VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023

ENGLERT LeafGuard
(614) 360-1068
CALL TO SCHEDULE FREE ESTIMATE
GOOD HOUSEKEEPING
LeafGuard 15 YEARS BACKED BY THE SEAL

LIFETIME NO-CLOG WARRANTY

- Next-Week Installation
- Financing Available
- Call to schedule FREE Estimate

CBUS TOP PICK 2018

- One-Piece System
- The only one-piece seamless debris shedding gutter system!
- ScratchGuard® Paint Finish
- Made onsite specifically for your home
- Professional Installation

We are dedicated to ensuring your home is protected year round, which is why we offer a no-clog guarantee†. If your LeafGuard® gutter ever clogs, we will come out to clean at no cost to you.

75% OFF LABOR
RECEIVE A $25 LOWE'S GIFT CARD WITH FREE IN-HOME ESTIMATE

$99 Down
$99 Per Month
$99 Installation

†Guaranteed not to clog for as long as you own your home, or we will clean your gutters for free

From Waste to Resources

SWACO grants help fund waste-diversion programs

Most people know that SWACO operates the Franklin County Sanitary Landfill.

However, we're just as committed to keeping waste out of the landfill as we are to managing the waste that goes into it. In fact, we've helped the county reach the point where we now are recycling more than half of the waste material created by residents and businesses.

But we don't want to stop there.

We're aiming to reach 75% diversion by 2032, which is why many of our programs and services focus on recycling, composting and other activities that divert waste from the landfill. This includes our grants program.

SWACO offers two competitive grants, which are designed to promote and support recycling and other waste-diversion initiatives in Franklin County.

Our Event Waste Reduction Grant reimburses organizations for their efforts to minimize waste generated at events through recycling, reducing and reusing.

Our Community Waste Reduction Grant is available to schools, communities, nonprofits and government entities to help fund waste reduction and diversion programs.

This year, we awarded 15 Community Waste Reduction Grants totaling $201,873. That's the highest number of grants we've awarded – and the most money awarded – since we overhauled and reintroduced our longstanding grants program in 2015.

These numbers are a testament to our community's collective desire to be better stewards of the environment.

Interestingly, more than half of the grant recipients we selected intend to reduce residential or commercially generated food waste.

These projects align with SWACO's efforts to cut food waste in half over the next decade and reflect our community's increasing commitment to reducing food waste.

TY MARSH

We're excited about this trend, considering food waste is the top item, based on weight, thrown away in Franklin County and, as such, presents one of the biggest opportunities for waste diversion.

Here are the creative and interesting ways our grant recipients are using Community Waste Reduction Grants:

- The cities of Dublin, Hilliard, Upper Arlington and Westerville each are establishing or increasing the number of food-waste drop-off locations. Dublin's planned drop-off location is expected to serve up to 500 households and divert about 78,000 pounds of food waste from the landfill each year.
- A Reynoldsburg junior high school will establish a food-waste-composting program that turns cafeteria waste into compost for the school's gardens.
- Local Matters will provide hands-on nutrition and food-waste education and install a composting system capable of creating 100 pounds of compost each week, which will be used to nourish plants in its community gardens.
- The PAST Foundation will update its Garbology 2.0 curriculum used for teaching students in grades 5 through 12 about waste reduction, recycling and composting.
- Columbus Public Health is creating a food-waste-donation guide for restaurants and other businesses that serve food in Columbus.
- Food Rescue US will enhance its app to allow food donors to register available food, social-service agencies to communicate their food and delivery needs and volunteers to sign up to assist with rescuing and redistributing excess food.
- Habitat for Humanity will purchase a new truck to collect donations, which will help divert an estimated 696 tons of usable material from the landfill.
- Columbus City Schools will install water-bottle-filling stations in 31 buildings with no air-conditioning, with the goal of cutting the use of disposable water bottles in half.
- The Furniture Bank of Central Ohio purchased reusable bulk-collection containers to collect, store and transport household items so they can be distributed to families in need instead of thrown in the garbage.
- LifeCare Alliance purchased 10 recycling-sorting stations for use at its three facilities.
- Franklin Park Conservatory and Botanical Gardens is purchasing new recycling containers and signs to increase employee and visitor recycling.
- Franklin Township will purchase new recycling stations for its administration offices and its police and fire stations.

We're proud to be helping organizations and communities implement sustainable practices that protect the environment and ensure the long-term viability of the landfill. After all, the less material we put into the landfill, the longer it will last.

SWACO is accepting applications for its 2021 grant cycle until 5 p.m. Aug. 28. We invite schools, nonprofits and public entities to apply. The application form is available on swaco.org under the "Diversion" section.

Ty Marsh is executive director of SWACO. Questions about its operations can be directed to him at questions@swaco.org. His office provides this column to ThisWeek Community News.

VIRTUAL PUBLIC MEETING

Learn about the John Glenn Columbus International Airport Part 150 Noise Compatibility Study

Wednesday, September 2, 2020
5 to 7 PM

Pre-registration required.
Register and send questions in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings/

If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact the Project Team at 513.818.0626 by August 26.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

Learn more at www.airportprojects.net/cmh-part150/

Coming up

To add or update a listing, send an email to editorial@thisweeknews.com.

Support groups

NAMI Connection, a peer support group for adults living with mental illness of any kind, noon to 1:30 p.m. the last Saturday of each month at Ohio State University East, Talbot Hall, 1492 E. Broad St. This group is free and meets for 90 minutes once a month. NAMI Connection offers a casual environment and the facilitators are individuals who are in recovery themselves. No registration or enrollment is required. For more information, call NAMI Franklin County at 614-501-6264.

Alzheimer's Caregiver Support Group, sponsored by the Alzheimer's Association, Central Ohio Chapter, 6:30 p.m. the second Tuesday of the month at Redeemer Lutheran Church, 1555 S. James Road. Open to those caring for someone with memory loss. For information call the 24/7 Helpline at 800-272-3900.

Crohn's & Colitis Foundation of America, support groups for patients with Crohn's and ulcerative colitis as well as their family members, meeting in Reynoldsburg and Delaware. Visit ccfa.org/chapters/centralohio for times and dates or call 614-889-6060.

Caregiver Support Group, noon to 1 p.m. or 5:30 to 7 p.m., each third Wednesday of the month at the Central Ohio Area Agency on Aging, 3776 S. High St. Topics covered include the hiring of in-home help, qualifying for homecare programs and dealing with the everyday stresses of caregiving. Free and free parking is available. Registration is necessary; caregivers can contact the agency at 614-645-7250, 1-800-569-7277.

Award-winning prep sports coverage, updated daily at ThisWeekSPORTS.com

Call me for all your Real Estate advertising needs.

Call for information on: Marketing strategies, ad design, online advertising, including SEO/SEM, special sections and more!

614-461-5153

AMY VIDRICK
avidrick@dispatch.com

ThisWeek COMMUNITY NEWS / DISPATCH MEDIA GROUP

WORSHIP DIRECTORY

Advertising Information

We invite you to share your Services, Programs and Special Events with the community each week in the Friday edition of The Columbus Dispatch and ThisWeek Community Newspapers.

For more information or to place your Worship Services ad please call:

Sherry Blissenbach
614-583-5797
or email
sblissenbach@dispatch.com

Deadlines:
12 Noon Wednesday

STATE OF OHIO NOTARIAL SEAL

VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023

From Waste to Resources

SWACO grants help fund waste-diversion programs

Ty Marsh

Most people know that SWACO operates the Franklin County Sanitary Landfill.

However, we're just as committed to keeping waste out of the landfill as we are to managing the waste that goes into it. In fact, we've helped the county reach the point where we now are recycling more than half of the waste material created by residents and businesses.

But we don't want to stop there.

We're aiming to reach 75% diversion by 2032, which is why many of our programs and services focus on recycling, composting and other activities that divert waste from the landfill. This includes our grants program.

SWACO offers two competitive grants, which are designed to promote and support recycling and other waste-diversion initiatives in Franklin County.

Our Event Waste Reduction Grant reimburses organizations for their efforts to minimize waste generated at events through recycling, reducing and reusing.

Our Community Waste Reduction Grant is available to schools, communities, nonprofits and government entities to help fund waste reduction and diversion programs.

This year, we awarded 15 Community Waste Reduction Grants totaling $201,873. That's the highest number of grants we've awarded – and the most money awarded – since we overhauled and reintroduced our longstanding grants program in 2015.

These numbers are a testament to our community's collective desire to be better stewards of the environment.

Interestingly, more than half of the grant recipients we selected intend to reduce residential or commercially generated food waste.

These projects align with SWACO's efforts to cut food waste in half over the next decade and reflect our community's increasing commitment to reducing food waste.

We're excited about this trend, considering food waste is the top item, based on weight, thrown away in Franklin County and, as such, presents one of the biggest opportunities for waste diversion.

Here are the creative and interesting ways our grant recipients are using Community Waste Reduction Grants:

• The cities of Dublin, Hilliard, Upper Arlington and Westerville each are establishing or increasing the number of food-waste drop-off locations. Dublin's planned drop-off location is expected to serve up to 500 households and divert about 78,000 pounds of food waste from the landfill each year.

• A Reynoldsburg junior high school will establish a food-waste-composting program that turns cafeteria waste into compost for the school's gardens.

• Local Matters will provide hands-on nutrition and food-waste education and install a composting system capable of creating 100 pounds of compost each week, which will be used to nourish plants in its community gardens.

• The PAST Foundation will update its Garbology 2.0 curriculum used for teaching students in grades 5 through 12 about waste reduction, recycling and composting.

• Columbus Public Health is creating a food-waste-donation guide for restaurants and other businesses that serve food in Columbus.

• Food Rescue US will enhance its app to allow food donors to register available food, social-service agencies to communicate their food and delivery needs and volunteers to sign up to assist with rescuing and redistributing excess food.

• Habitat for Humanity will purchase a new truck to collect donations, which will help divert an estimated 696 tons of usable material from the landfill.

• Columbus City Schools will install water-bottle-filling stations in 31 buildings with no air-conditioning, with the goal of cutting the use of disposable water bottles in half.

• The Furniture Bank of Central Ohio purchased reusable bulk-collection containers to collect, store and transport household items so they can be distributed to families in need instead of thrown in the garbage.

• LifeCare Alliance purchased 10 recycling-sorting stations for use at its three facilities.

• Franklin Park Conservatory and Botanical Gardens is purchasing new recycling containers and signs to increase employee and visitor recycling.

• Franklin Township will purchase new recycling stations for its administration offices and its police and fire stations.

We're proud to be helping organizations and communities implement sustainable practices that protect the environment and ensure the long-term viability of the landfill. After all, the less material we put into the landfill, the longer it will last.

SWACO is accepting applications for its 2021 grant cycle until 5 p.m. Aug. 28. We invite schools, nonprofits and public entities to apply. The application form is available on swaco.org under the "Diversion" section.

Ty Marsh is executive director of SWACO. Questions about its operations can be directed to him at questions@swaco.org. His office provides this column to ThisWeek Community News.

Paid Advertisement

Have You Heard?

by Greg VanHoesen

AUDITORY BRAINSTEM IMPLANTS

For children born with damaged or absent auditory nerves, brainstem implants can be effective in cases where cochlear implants and hearing aids cannot. Auditory brainstem implants (ABIs) bypass both the inner ear and the auditory nerve to communicate directly with the brainstem. They can also help those born with temporal bone fractures or cochlear nerve damage. Trials in Europe and North America have shown that ABI implants are more effective in children under the age of five than they are in those over 12. This has led scientists to look more closely at brain development for answers. In fact, younger recipients have shown auditory, cognitive, and speech development at the same level as children with cochlear implants.

After an auditory brainstem implant procedure, you'll need many sessions with a skilled hearing aid specialist to adjust the sound processor and learn how to use and interpret the signals. This process can take months. You'll generally see your specialist every two to four months the first year and annually after the first year. To learn more about how this technology can help you or a loved one, Please call for an evaluation and consultation at ABSOLUTE HEARING SOLUTIONS. If you or a family member are not hearing as well as you could, please call us at 614-654-4309 to schedule a complimentary hearing & speech reception evaluation. Many of our patients have discovered that traveling to Gahanna was worth the drive. We are First in Class on Angie's List. We beat competitor's pricing by 25%- 70%, we have the top 10 leading hearing aid brands, and we put our customer's first. We offer special discounts and promotions to veterans, police officers, and firefighters. We are located at 750 Cross Point Rd Suite F, Gahanna Come see why patients are willing to make the drive to invest in their hearing. We look forward to hearing from you.

2018 2012

We handle Starkey, Phonak, Siemens, Unitron, MicroTech, GN ReSound, Rexton, Oticon, and Widex. Plus, we have the same products as NU-Ear, AudioSync, and Miracle Ear, but you will save $1,000's with us!

www.absolutehearingsolutions.com

We take a bite out of the cost of hearing aids!

VIRTUAL PUBLIC MEETING

Learn about the John Glenn Columbus International Airport Part 150 Noise Compatibility Study

Wednesday, September 2, 2020
5 to 7 PM

Pre-registration required.

Register and send questions in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings/

If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact the Project Team at 513.818.0626 by August 26.

COLUMBUS REGIONAL AIRPORT AUTHORITY

JOHN GLENN INTERNATIONAL

Learn more at www.airportprojects.net/cmh-part150/

Style Encore

FROM >> A4

items all day every day and receive cash on the spot. No appointment is needed to sell items at the location, she said.

Kasten said the goal is to offer an online store in September, with customers using PayPal so they can shop from the comforts of their own homes.

"We want to make sure they have a good experience," she said.

Rafol said her team takes the sanitation process seriously, and they're working to meet the customer's comfort level during the pandemic.

"Women like to have trendy, fashionable pieces in their closet for every occasion, so our goal is to make Style Encore the preferred store for fashionistas, bargain hunters and those who are recycling-conscious," she said.

"Style Encore provides women the resource to sell items they no longer wear, get paid cash on the spot and then turn around and purchase new items at a tremendous value – up to 90% off regular retail prices."

The business is open from 10 a.m. to 8 p.m. Mondays through Saturdays and noon to 6 p.m. Sundays.

Style Encore is franchised by Minnesota-based Winmark Corp., which also franchises Music Go Round, Once Upon a Child, Plato's Closet and Play It Again Sports.

For more information, go to style-encore.com/locations/gahanna-oh or call 614-289-3009.

mkuhman@thisweeknews.com
@ThisWeekMarla

VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023

ThisWeekSPORTS.com
ALL HIGH SCHOOL SPORTS, ALL THE TIME

TOP REAL ESTATE DEALS THIS WEEK

Which area of central Ohio has the hottest real estate market right now? How much did that house sell for down the street? How much are homes in your community compared to homes across town? You'll find the answers to those questions in ThisWeek's exclusive Top Real Estate Deals This Week. This list is a compilation of the area's top home and condominium transactions for a given week. All sales occurred within the ThisWeek circulation area.

Listed here is the address of the property sold, compiled by the Columbus Dispatch.

Delaware

1413 Haverhill Ct; $697,900; Autin Malcolm Anthony & Ashley Holt
4708 Hyatts Rd; $485,000; Kearl Leonard C
1525 State Route 203; $430,000; Boehnke Kathryn G & Benjamin
594 Trace Dr; $450,000; Parker Andrew & Chelsea
914 Farmington Ln; $450,000; Visampalli Chemundeswari Harika & Chandrashekar Nalla
412 Braumiller Crossing Dr; $419,000; Leroy Kristen S & Jennifer M

Dublin

5953 Trafalgar Ct; $715,000; Harmanis Michael R & Lorenz Lindley
6651 Bannockburn Ln; $557,500; Brust Matthew R & Brust Rachel C
7370 Linden Ln; $540,000; Maurer Bruce & Maurer Mary
5790 Crighton Dr; $500,000; Banick R Kirby & Banick Susan K
7913 Wiltshire Dr; $387,000; Wilson Richard J & Wilson Tracy R
9982 Allen Dr; $1,150,000; Jestice Kevin & Leandra
7644 Tillinghast Dr; $880,000; Austin Adrienne J
5510 Stansbury Dr; $845,000; Pope Amanda & Patrick
10761 Dunraven Ln; $582,515; Middley Charles Andrew & Jettie
6449 Martin Pl; $505,125; Galleti Anthony & Galleti Robin
7697 Featherwood Ln; $469,900; Mancher Nirupa & Rajagopal Manoj
4992 Crosshaven Ln; $466,500; Kefalonitis Andrew Jr & Kefalonitis Elizabeth Bridie
6695 Dublin Rd; $445,000; Meng Rui & Huang Bowen
6688 Cooperstone Dr; $415,000; Mittal Preethu

Galena

5368 Red Bank Rd; $735,000; Ryan Thomas S & Lynette
5346 Red Bank Rd; $712,000; Griffiths Mary Lou
5125 Nash Ct; $640,000; Frabell Louis John & Emily J
5576 Plumb Rd; $475,000; Brown Erica M & Marhart John M
7505 Kenfield Dr; $458,000; Hildebrand Erin & Adrian

Hilliard

6590 Mandvilew Dr; $624,777; Heidemann Michael B & Heidemann Amy
6185 Heritage Lakes Dr; $520,000; Kingsland Wyatt A
4618 Carrington Wy; $465,000; Korcal Andrew & Korcal Ashley R
5890 Morganwood Sq; $450,000; Lyons Guy & Lyons Molly
4191 Greenbelt Dr; $398,500; Jones Reginald & Jones Sherry D
2651 Bayshore Ct; $473,500; Van Dacle David & Heather Joy

Lewis Center

3357 Farmers Delight Dr; $469,915; Bergfeld Eric J & Stephanie M
2990 Waterford Dr; $415,000; Walls Ramon C & Leslie D
3426 Pleasant Colony Dr; $412,500; Abbas Syed Mazahir & Shah J Tabinda
5964 Windward Ct; $390,000; Armstrong Scott P & Crystal

New Albany

7518 Ogden Woods Bl; $685,000; Higgins Michelle & Higgins John
41 Keswick Woods; $585,000; Zimmerman Shawn D & Zimmerman Elizabeth G
7437 Ratchford Ct; $620,000; Higginbotham Cathi Jr & Higginbotham Sonya L
7087 Fernridge Dr; $595,000; Chernyak Danil V & Chernyak Amanda L

Powell

3860 Coldwater Loop; $650,000; Swords Tracy & Kevin
136 Cressingham Ln; $623,000; Hostnik Eric T & Laura Dunbar
411 Shale Ridge Ct; $575,000; Nore Evan J & Rebecca A
475 Woodard Pl; $502,000; Sevart Gregg & Lauren
8429 Maple Leaf Ct; $485,000; Wheeling Robert H Trustee
4625 Cascade Dr; $465,000; Purcell Michael A & Molly C
387 Vinwood Ln; $451,000; Morse Trevor D & Erica M
4175 Dashly Dr; $435,000; Sheel Prashant & Goodra Anvita
4167 Dashly Dr; $433,000; Desai Pramodh & Challanda Sai Haritha
4744 Stone View Ct; $414,900; Miles Kristen M & Ritze Brandon M
3439 Windy Forest Ln; $400,000; Lombardi Matthew & Brenda A.
4181 Bishopsgate Way; $395,000; Trout Nancy B
7408 Avendale Dr; $385,000; Boltz Karyn C

Westerville

447 Buckhorn Ct; $585,000; Donovan Ryan S & Donovan Jessica A
6083 Gainey Ct; $475,000; Barker Michael Edward & Linda Phuong Thanh
6094 Misty Point Ct; $450,000; Busick Heather N & Patrick G
5414 Arnecia Ct; $412,000; Humbert Brett & Brittany
5788 Gentry St; $409,000; Cook Margaret H & Womble Derek C
61 W South St; $450,000; Yae Helen H
6800 E Alloway St; $435,000; Gopalakrishna Veena
5797 Pioneers Ct; $397,000; Gilliam Catherine

Grove City

2684 Lori's Way; $427,940; Zeng Qiang & Li Jie
3325 Lambert Rd; $410,000; Speelman Thomas M & Speelman Susan D
Pickerington607 Ludham Trl; $405,000; Diallo Assiatou
12359 Rainbee Ave Nw; $399,900; Padgett Melanie

Columbus

957 Neil Av; $960,000; Awais Mazen & Kawe Amrita
34 - 36 W Fourth Av; $701,000; 34-36 W 4th Ave Llc
976 Neil Av; $649,000; Prestidge Melanie
119 S Ohio Av; $460,000; Enouen Matthew Carl & Enouen Jourdan Marie
889 Dennison Av; $439,999; Keller Stuart Alan & Britt Molly Mcclure

German Village

494 E Whittier St; $405,000; Craynelis Emma & Wamouth Zachary

Bexley

2498 Fair Av; $720,000; Barger Kyle
2833 Elm Av; $625,000; Hartley Jordan
3095 Dale Av; $470,000; Molnar Jason P & Molnar Adrienne M
200 S Chesterfield Rd; $385,000; Florence James

Grandview

1645 Andover Rd; $572,800; E & E Collective Llc
1867 West Fifth Av; $393,000; Klabunde Nathan & Klabunde Bevin M

Clintonville/Beechwold

138 Arden Rd; $456,000; Glencher Brandon
130 E Scheyer Pl; $420,000; Donnelly Sean T & Donnelly Laura
185 Sheffield Rd; $385,000; Blood Sean E & Decker Lauren M

Upper Arlington

2185 Sheringham Rd; $900,000; Tozbikian Gary M & Tozbikian Stephanie K
4130 Edgehill Dr; $699,900; Pathak Parag & Pathak Anesha
3725 Seaford Dr; $660,000; Runge Thomas M & Runge Kimberly A W
4201 Woodbridge Rd; $605,000; Sommers Richard W Jr
2498 Danvers Ct; $555,000; Merchant Owen & Kennedy Jean
2340 Middlesex Rd; $479,000; Berger Nicole & Berger Nicholas V
2276 Arlington Ave; $505,000; Ballagean Justin

Gahanna

650 Havens Corners Rd; $400,000; Garman Lucas J

Northwest Side

7530 Ravens Nest Ct; $550,000; Vigilano Robert & Vigilano Dawn
1306 Haman Ave; $435,040; Miller Jennifer Anne & Miller Quinn G
1185 Bluffway Dr; $434,500; Grossman Andrew S Trustee
642 Skylark Ln; $420,000; Treves Marc A & Tarlton Tara D

WORKING 10 TIMES HARDER FOR YOU

RORY X 10 = SOLD

Give your story to Rory and let him go to work for you!

Rory Averill

RE/MAX North

614-431-0300 Office
614-296-3703 Cell
averillhomes@gmail.com

www.ColumbusOhioHouses.com

Each office independently owned and operated.

VIRTUAL
PUBLIC
MEETING

Learn about the John Glenn Columbus International Airport Part 150 Noise Compatibility Study

Wednesday, September 2, 2020
5 to 7 PM

Pre-registration required.
Register and send questions in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings/

If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact the Project Team at 513.818.0626 by August 26.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

Learn more at www.airportprojects.net/cmh-part150/

accuse LaRose of doing the bidding of President Donald Trump, a critic of voting by mail.

LaRose made that decision after waiting weeks for a legal determination on his authority from Ohio Attorney General Dave Yost. LaRose withdrew his request

pay for postage," she said.

More information about requesting an absentee ballot is available at https://www.ohiosos.gov/elections/voters/absentee-voting/.

rrouan@dispatch.com
@RickRouan

At 'luncheon,' Dems pin Ohio's problems on GOP

Rick Rouan
The Columbus Dispatch | USA TODAY NETWORK

Ohio Democrats are putting the blame for problems that plague the state squarely on the shoulders of Republicans who have ruled Ohio for most of the past several decades.

During a lunch-hour video conference with the party's presidential delegates, elected officials and party leaders blamed President Donald Trump for the pandemic and economic crisis, highlighted the Statehouse corruption scandal that has ensnared former Ohio House Speaker Larry Householder and GOP lobbyist Neal Clark, and slammed Ohio Secretary of State Frank LaRose for his decision to allow only one absentee ballot drop box in each county.

And, yes, they gave their solution for fixing the problems: Elect Democrats.

"We have to build back better. We need to turn Ohio blue because election day starts today. Every day from this day forward is election day," said U.S. Rep. Marcia Fudge of Cleveland. "We cannot wait until the last minute to make change. Change is who we are because we are the people's party."

Democrats have struggled in statewide elections during the last several cycles. Trump won Ohio by 8 percentage points in 2016. Republicans cleaned up in statewide non-judicial offices in 2018. Sen. Sherrod Brown's 7-point victory was an outlier for the party two years ago.

"They have had 25 years of a culture of corruption in this state," Brown said.

Brown asked the delegates to find people in their lives who likely wouldn't vote and to help educate them on the issues and how to vote. He blamed Republicans for inadequate school funding and inequitable tax policies, and he put the burden of the 170,000 who have died in the COVID-19 outbreak in the U.S. on Trump.

"When we win Ohio for Biden, and Harris it's going to mean an electoral college landslide. When we win Ohio it means we'll win Pennsylvania, Michigan and Wisconsin," he said.

The daily digital lunch gathering is the party's substitute for the breakfast meetings it would have at an in-person convention. Those have drawn a national cast of political speakers in the past.

They also have acted as a springboard for officeholders who are looking to run statewide campaigns two years later to introduce themselves to delegates around the state.

On Tuesday, Columbus City Attorney Zach Klein reassured the delegates that they have a chance to make changes at the ballot box. His remarks straddled both personal introduction and political rally for Democrats on the 2020 ballot.

He lamented what he said was Trump's "fanning the flames of divisions" and other failures while highlighting legal actions his office has taken to preserve city gun regulations and to fight the Trump administration on changes to the Affordable Care Act.

"It's like all the gains we made under President Obama and Vice President Biden are being squandered. I want you to know right now that hope is not lost," he said.

Klein and Dayton Mayor Nan Whaley, co-sponsors of the Tuesday lunch, both are seen as potential Democratic candidates to run for statewide elected office in 2022.

Recounting her experience leading a city through a mass shooting last summer, Whaley blamed Republicans for failing to act on gun control measures. After nine people were killed in Dayton a day after 23 died in a shooting in El Paso, Whaley said she was hopeful that change would follow.

So far, though, no action has been taken. Whaley called Gov. Mike DeWine's plan, whch received a lukewarm reception in the Republican-controlled Ohio General Assembly, a "watered down" proposal.

rrouan@dispatch.com
@RickRouan

Asegura tu futuro

en la Industria de la Limpieza Comercial

Sé tu propio jefe
Potencial de ganancias ilimitado
No se requiere experiencia

Entrepreneur FRANCHISE 500 TOP GROWTH FRANCHISE 2020

Guaranteed account sales | Training & support | Lowest costs in the industry | As low as $1,000 down

STRATUS BUILDING SOLUTIONS

StratusClean.com (614)500-4141

Franchising with Stratus places you at the forefront of the cleaning and disinfecting business

dish LATINO

Cámbiate a DishLATINO con el DVR Hopper® 3 y te regalamos un timbre con cámara Google Nest Hello.

Con el timbre con cámara Google Nest Hello podrás ver quién está en tu puerta directamente en tu televisor, o en tu dispositivo móvil compatible.

Disponible hasta agotar la existencia. Google y Google Nest Hello son marcas registradas de Google LLC.

DishLATINO tiene más ventajas para ti y tu familia

precio fijo garantizado por 2 años ◦ la mejor programación en español e inglés ◦ Conexión a 2 TVs ◦ HOPPER DVR incluido

No incluye canales locales. **Después de 2 años se aplicarán los cargos regulares vigentes por el DVR y el receptor. Programación sujeta a cambios sin previo aviso. Todas las ofertas requieren calificación de crédito, contrato de 24 meses con cargo por desconexión temprana y facturación electrónica con pago automático. Aplican restricciones.

Cámbiate a DishLATINO y obtén un timbre con cámara Nest Hello, sin ningún costo e instalado por nuestros expertos.

Del Cid satellites
(614) 638-0349

dish Premier Local Retailer

Oferta por tiempo limitado. Disponible para clientes nuevos que se suscriban al servicio de DishLATINO con el DVR Hopper 3. Algunas funciones, incluyendo notificaciones al dispositivo móvil, al control remoto, hacer streaming y/o grabación de video, requieren conexión a internet y Wi-Fi. El Control Remoto de Voz de DISH con Asistente de Google requiere un receptor Hopper, Joey o Wally conectado a internet. Las funciones de hogar inteligente con Asistente de Google requieren una cuenta de Google y dispositivos compatibles. Google Nest Hello Video Doorbell y Google son marcas registradas de Google, LLC.

LDRIVE_26011

REUNIÓN PÚBLICA VIRTUAL

Aprenda sobre el Estudio de Compatibilidad de Ruido Parte 150 que se esta preparando para el Aeropuerto Internacional John Glenn Columbus

Miércoles 2 de septiembre de 2020
de 5:00 pm a 7:00 pm

Se requiere pre-registro.
Regístrese y envíe preguntas con antelación a

www.airportprojects.net/cmh-part150/home/public-meetings/

Si se requiere un alojamiento especial, como asistencia visual o audiovisual, para participar en la reunión en línea, o si no tiene acceso a Internet, por favor comuníquese con el equipo del proyecto al 513.818.0626 antes del 31 de agosto de 2020.

COLUMBUS REGIONAL AIRPORT AUTHORITY

JOHN GLENN INTERNATIONAL

Aprende más: www.airportprojects.net/cmh-part150/

Communicator^_Layout 1 8/18/20 10:34 PM Page 1

CLASSIFIED

PUBLIC NOTICE
Division of the State Fire Marshal
Bureau of Underground Storage Tank Regulations

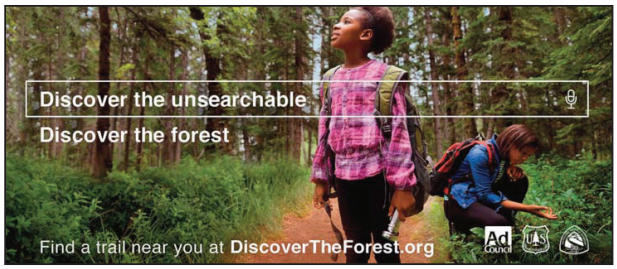
Pursuant to the rules governing the remediation of releases of petroleum from underground storage tank (UST) system(s), notice to the public is required whenever there is a confirmed release of petroleum from an UST system(s) that requires a remedial action plan. Notice is hereby given that a confirmed release of petroleum has occurred from the UST system(s) located at:

Former Certified Oil Company #217
5323 Westerville Road
Westerville, Ohio 43081
Franklin County
BUSTR Release Number: 25000771-N00001(2)

A proposed remedial action plan (RAP) dated July 22, 2020, was submitted by the owner and/or operator of the UST system(s) for the review and approval of the State Fire Marshal (SFM). Once the SFM has reviewed and approved the proposed RAP, the owner and/or operator of the UST system(s) will be required to implement the proposed RAP.

A copy of the proposed RAP, as well as other documentation relating to this release and the UST system(s) involved, is maintained by the Bureau of Underground Storage Tank Regulations (BUSTR), and are available for inspection and copying by the public. Requests for copies or for inspection of the proposed RAP and other related documentation should be made through the use of the "Public Information Request on UST facilities" link located on BUSTR's Resource Page at https://apps.com.ohio.gov/fire/otter/?tabid=2 or by calling our office at (614) 752-7938.

The SFM will accept written comments on this RAP for a period of 21 days from the date of publication of this notice. You may submit any comments regarding this site and the RAP, in writing, BUSTR, P.O. Box 687, Reynoldsburg, Ohio 43068. For further information, please contact David Israel at (614) 752-7225. Please reference release #25000771-N00001 when making all inquiries or comments.



VIRTUAL PUBLIC MEETING

Learn about the John Glenn Columbus International Airport Part 150 Noise Compatibility Study

Wednesday, September 2, 2020
5 to 7 PM

Pre-registration required.

Register and send questions in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings/

If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact the Project Team at 513.818.0626 by August 26.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

Learn more at www.airportprojects.net/cmh-part150/

Mobility Engineer

Franklin County Engineer Cornell Robertson is seeking a Mobility Engineer to manage the Mobility Department. Responsibilities include supervision of signing, signal, and route marking operations, plan review for proper traffic control, oversight of traffic and engineering studies, and departmental budget development and administration. Requires a Professional Engineering license. Successful candidates will bring a positive attitude and demonstrated experience. Interested applicants should submit a resume and application (available at www.franklincountyengineer.org) to the following address no later than Friday, September 11, 2020.

Franklin County Engineer
Human Resources Department
970 Dublin Road
Columbus, Ohio 43215
EOE

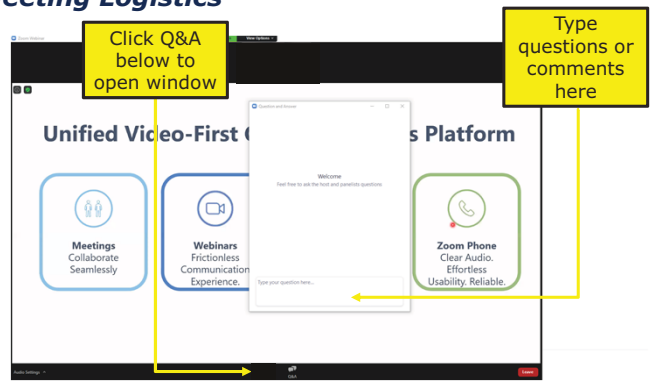
Part 150 Noise Compatibility Study

Public Information Meeting
September 2, 2020

JOHN GLENN INTERNATIONAL

1

Meeting Logistics



JOHN GLENN INTERNATIONAL

2

Agenda

- Welcome and Discussion of Virtual Meeting Resources
- The Value of CMH and Current Highlights
- Part 150 Noise Compatibility Study Process
- History of Noise Compatibility Planning
- Data Collection
- Existing and Future Baseline Noise Exposure Contours
- Noise Compatibility Program (NCP) Measures
- Next Steps

JOHN GLENN INTERNATIONAL

3

"Driving Economic Growth, Connecting Ohio With the World"

How does CMH/CRAA Benefit the Community?

- Provided ~160 peak daily departures to 47 destinations pre-pandemic
  (~61 daily departures to 36 destinations, currently)
- Significant Impact to the Local Economy
  - Total Jobs: **33,360**
  - Total Annual Payroll: **$1.7 Billion**
  - Total Annual Economic Impact: **$5.3 Billion**

JOHN GLENN INTERNATIONAL

4

"Driving Economic Growth, Connecting Ohio With the World"

Ongoing Development at CMH

Consolidated Rental Car Facility

- Open to public in 3rd Quarter, 2021
- 2,500 Storage Spaces
- $140M Capital Investment ($95M in construction resulting in 1,600 jobs)

Residence Inn Hotel

- Opening Fall, 2020
- 122 Guest Suites on 4 Floors
- Meeting Space for up to 35 Guests

JOHN GLENN INTERNATIONAL

5

5

"Driving Economic Growth, Connecting Ohio With the World"

How Has CRAA Managed the Pandemic?

Complimentary Mask Station Installed

Social Distant Queuing and Seating

PPE Vending Machines

First Facility in Columbus to be Awarded the Global Biorisk Advisory Council (GBAC) Star Accreditation for Facility Safety and Cleanliness

JOHN GLENN INTERNATIONAL

6

6

Part 150 Noise Compatibility Study Process

What is a Part 150 Study?

- Part 150 studies are planning studies to identify airport noise and land use compatibility impacts
- Named for 14 CFR Part 150 of the Code of Federal Regulations
- Must follow Federal guidelines with regard to process and methodology
- Makes an airport eligible for funding for certain mitigation measures
- Funding is not guaranteed

JOHN GLENN INTERNATIONAL

7

7

Part 150 Noise Compatibility Study Process

Essential Elements of a Part 150 Study

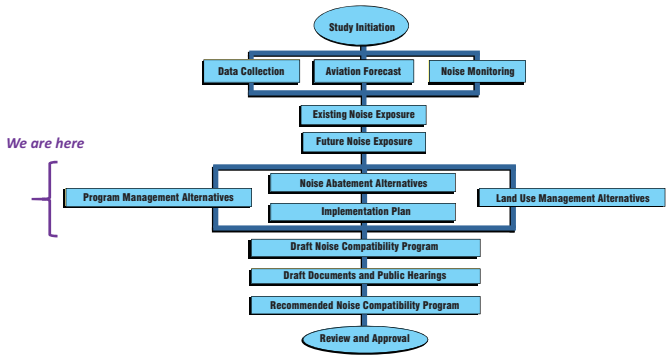
- Noise Exposure Maps (NEMs):
  - Description of the noise levels for existing and future (+5 years) conditions
- Noise Compatibility Program (NCP):
  - Recommendations for reducing, minimizing, and/or mitigating aircraft noise and land use conflicts
    - Noise Abatement
    - Land Use Mitigation
    - Program Management Measures
- Public Involvement

JOHN GLENN INTERNATIONAL

8

8

Part 150 Noise Compatibility Study Process



JOHN GLENN INTERNATIONAL 9

9

History of Noise Compatibility Planning

Previous Part 150 Studies Completed at CMH

- 1987 Part 150 Study (original)
- 1993 Part 150 Study Update
- 1999 Part 150 Study Update
- 2001 Noise Exposure Map Update
- 2007 Part 150 Study Update (FAA Record of Approval in 2008)
  - Conducted concurrently with the Environmental Impact Statement (EIS) for relocation of the south runway

JOHN GLENN INTERNATIONAL 10

10

History of Noise Compatibility Planning

Mitigation Program Measures

- Residential Sound Insulation
  - CRAA has provided sound insulation to nearly 800 homes
- Acquisition Program
  - Acquisition of 35 homes impacted by relocation of the south runway
  - Provided relocation assistance to affected residents
- Tracking and Measuring Noise
  - Operates WebTrak System with 16 permanent noise monitors
  - Allows staff and the general public the ability to track flight activity and noise levels
- Noise Complaint & Inquiries
  - Dedicated staff to respond to complaints and inquiries about aircraft operations and noise
- Proactive planning
  - Adhere to both federal and local regulations
  - Maintain transparent communication
  - Provide information to land use planners, developers, and the general public

JOHN GLENN INTERNATIONAL 11

11

Data Collection

Comparison of Noise Levels

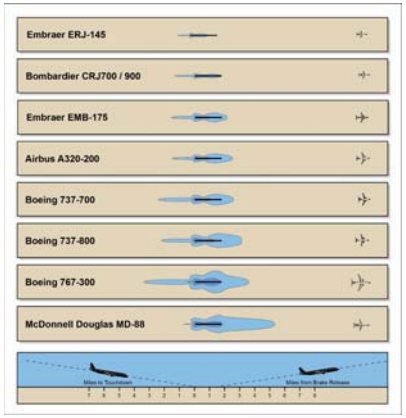
JOHN GLENN INTERNATIONAL 12

12

Data Collection

Aircraft Noise Footprints

- Represent single event noise levels.
- Overhead view of noise from arrival landing from the left and departure to the right.
- Older and larger aircraft such as the 767-300 and MD-88 have been or are being phased out at CMH.
- Newer aircraft have a smaller noise footprint.



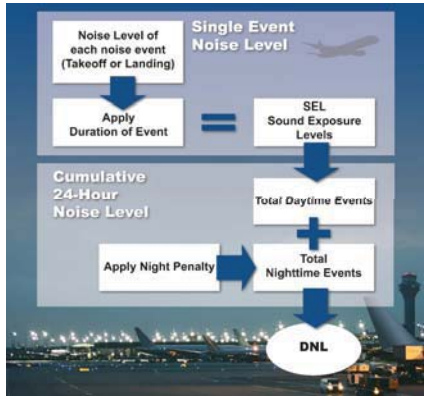
JOHN GLENN INTERNATIONAL

13

Data Collection

What is DNL

- Day-Night Average Sound Level
- Represents the average noise level over a 24-hour period
- Applies a 10 decibel "penalty" to nighttime noise events (between 10:00pm and 6:59am)
- Required metric for Federal noise studies

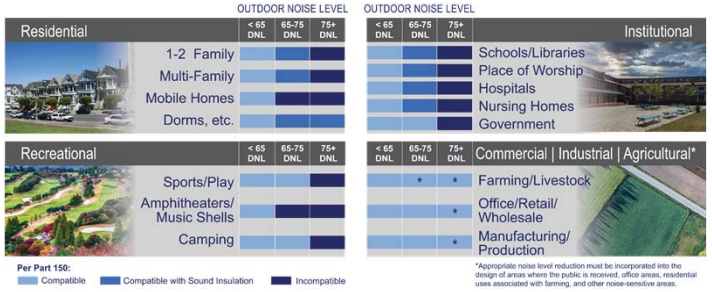


JOHN GLENN INTERNATIONAL

14

Part 150 Noise Compatibility Study Process

Land Use / Noise Sensitivity Matrix

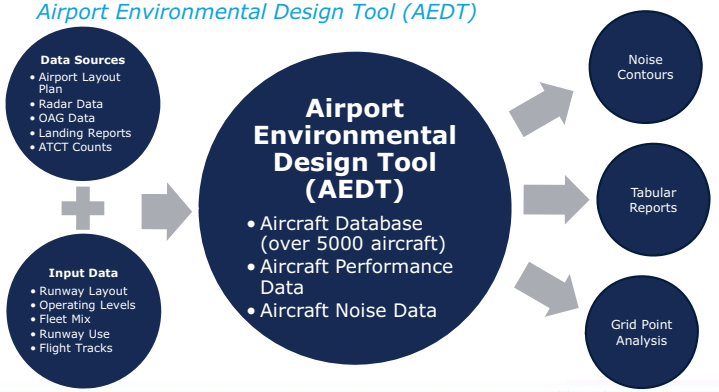


JOHN GLENN INTERNATIONAL

15

Data Collection

Airport Environmental Design Tool (AEDT)

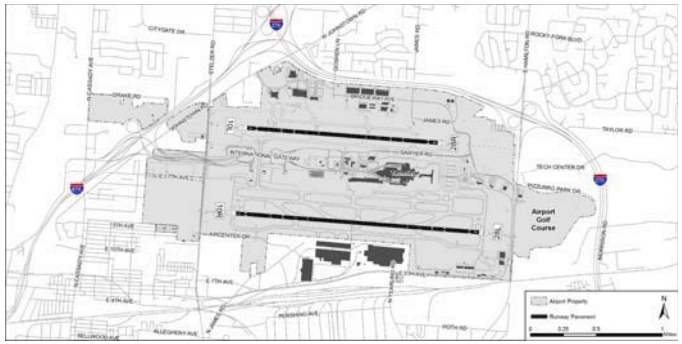


JOHN GLENN INTERNATIONAL

16

Data Collection

Runway Layout



17

Data Collection

Operating Levels

- Existing (2020) Operations
  - Actual based on FAA Air Traffic Control Tower records for September 2018 through August 2019
  - Reflects operating levels prior to decrease resulting from COVID-19 pandemic

Aircraft Category	2020 Existing Operations		
	Actual	Average Annual Day	Percent
Air Carrier & Commuter	113,961	312	84.4%
General Aviation	20,294	56	15.0%
Military	744	2	0.6%
Total	134,999	370	100.0%

18

Data Collection

Operating Levels

- Future (2025) Operations
  - Based on aviation activity forecast prepared for this Part 150 Study
  - The forecast was prepared and approved by the FAA prior to COVID-19 outbreak. Although the current outlook may differ, the forecast provides a conservative projection of future noise conditions.

Aircraft Category	2025 Forecast Operations		
	Forecast	Average Annual Day	Percent
Air Carrier & Commuter	128,580	352	85.6%
General Aviation	20,930	57	13.9%
Military	630	2	0.4%
Total	150,140	411	100.0%

19

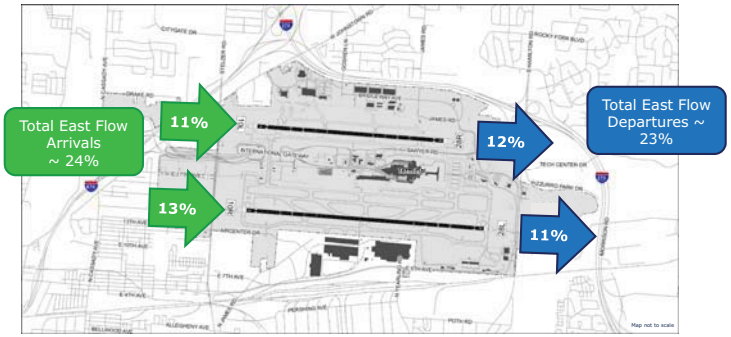
Existing Data Collection

Runway Use – West Flow

20

Existing Data Collection

Runway Use – East Flow



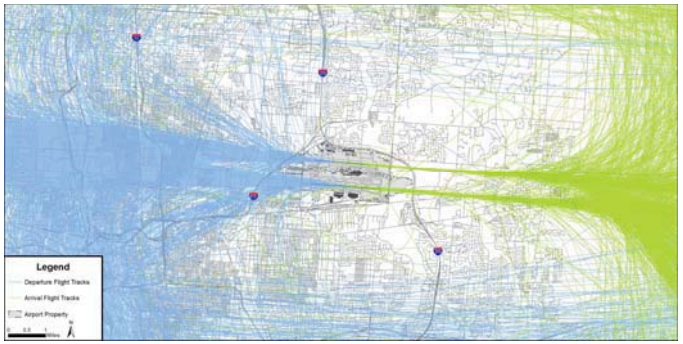
JOHN GLENN INTERNATIONAL

21

21

Existing Data Collection

West Flow Flight Tracks



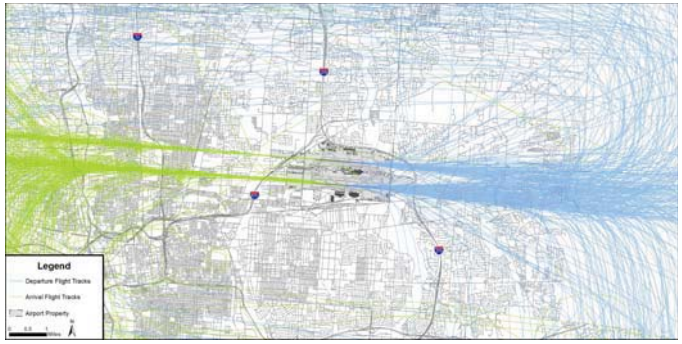
JOHN GLENN INTERNATIONAL

22

22

Existing Data Collection

East Flow Flight Tracks



JOHN GLENN INTERNATIONAL

23

23

Existing Data Collection

Noise Monitoring Program

- Validate/verify the input data in the AEDT (focus on departures)
- Obtain "real-life" noise measurements to assist in understanding the total noise environment
- Conducted the week of November 11, 2019
- Collected noise readings at 30 sites (approx. 1 hour at each site)

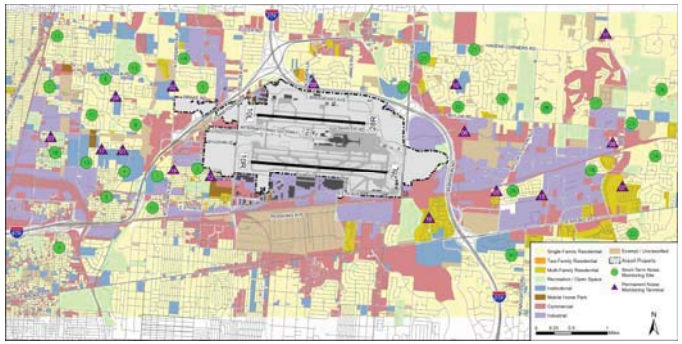
JOHN GLENN INTERNATIONAL

24

24

Existing Data Collection

Noise Monitoring Program



JOHN GLENN INTERNATIONAL

25

25

Noise Monitoring Program

Results

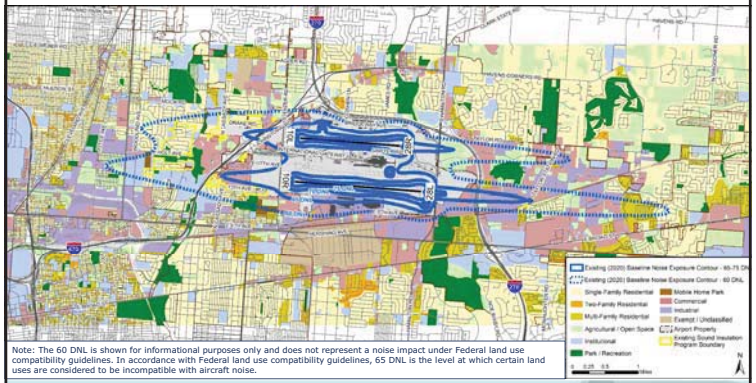
- Summary Results
  - Loudest aircraft recorded included, Boeing 737-800/900 and Embraer ERJ-175 aircraft
  - Average number of aircraft observed at each site was 11 to 12
  - Some aircraft noise events were combined with community noise sources such as intermittent car/truck traffic
  - Measured single event data was determined to be consistent with aircraft noise profiles modeled in AEDT

JOHN GLENN INTERNATIONAL

26

26

Existing (2020) Baseline Noise Exposure Contour



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

27

27

Existing (2020) Baseline Noise Exposure Contour

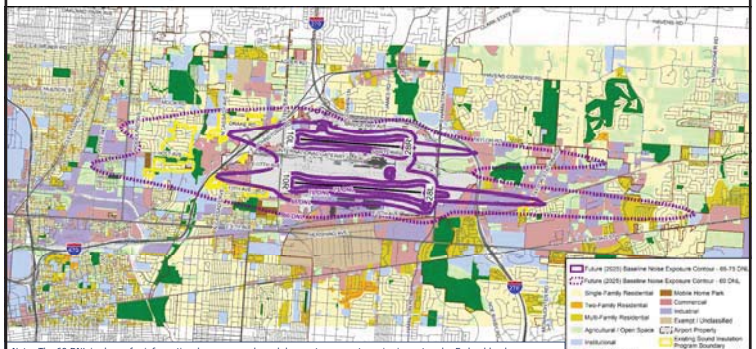
Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Population			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Noise-Sensitive Facilities			
Schools / Daycares	0	0	0

JOHN GLENN INTERNATIONAL

28

28

Future (2025) Baseline Noise Exposure Contour



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

29

29

Future (2025) Baseline Noise Exposure Contour

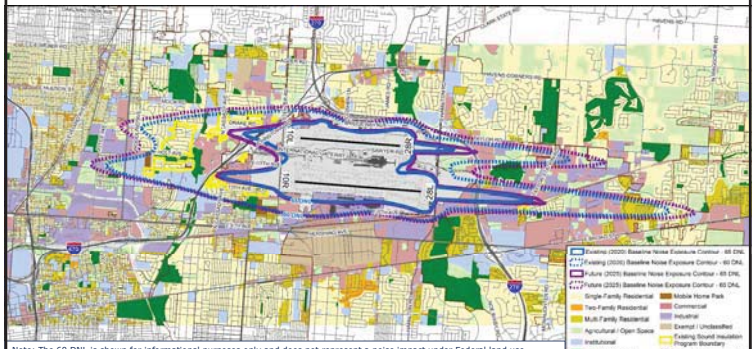
Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	1	0	0
Gahanna	1	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	**2**	**0**	**0**
Population			
Columbus	3	0	0
Gahanna	3	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	**6**	**0**	**0**
Noise-Sensitive Facilities			
Schools / Daycares	1	0	0

JOHN GLENN INTERNATIONAL

30

30

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



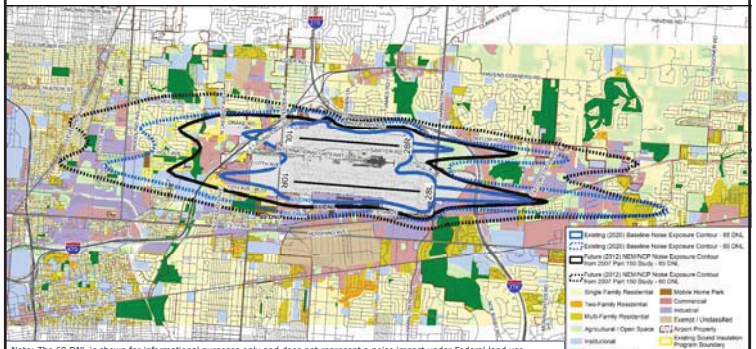
Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

31

31

Existing (2020) compared to Future (2012) NEM/NCP from the 2007 Part 150 Study



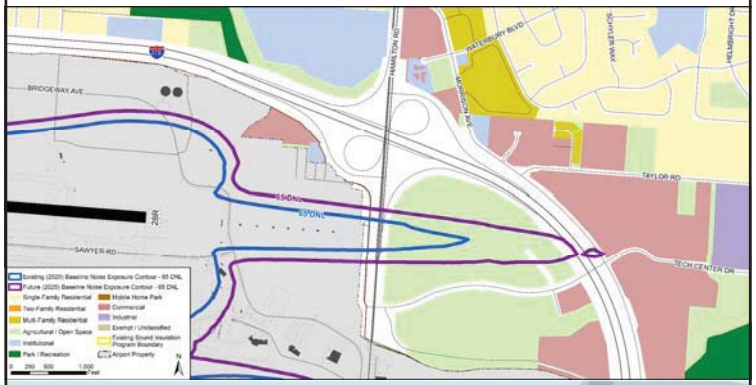
Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

32

32

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



JOHN GLENN INTERNATIONAL

33

33

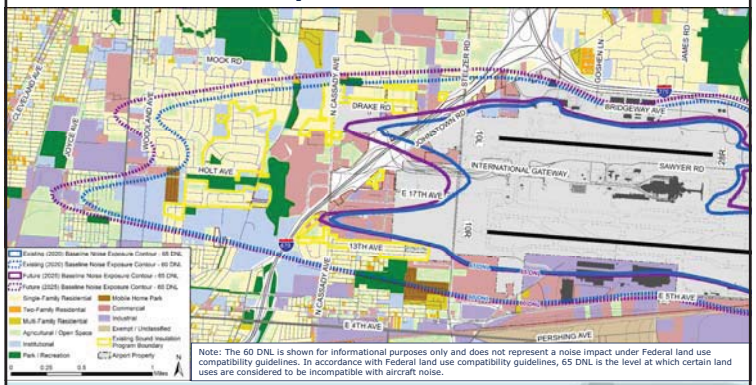
Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

JOHN GLENN INTERNATIONAL

34

34

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



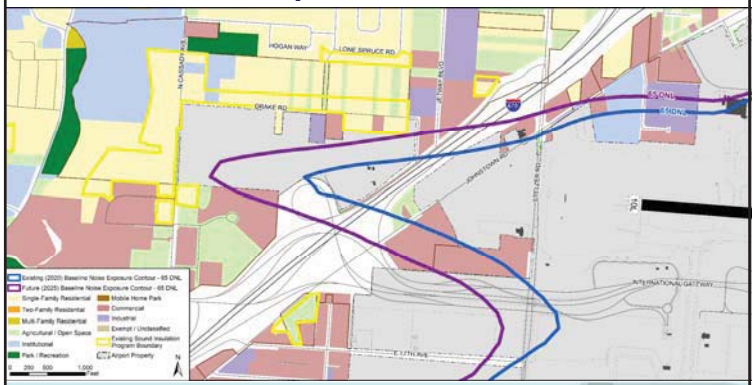
Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

35

35

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

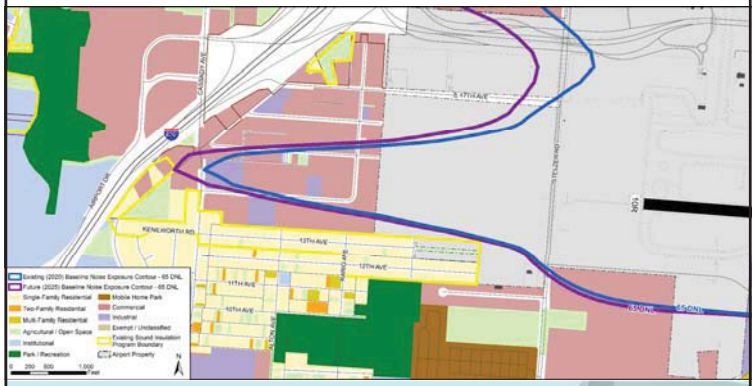


JOHN GLENN INTERNATIONAL

36

36

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



JOHN GLENN INTERNATIONAL 37

37

Noise Compatibility Program

Types of Program Measures

- Noise Abatement Measures
  - Examples include preferential runway use, flight track adjustments, profile/thrust settings
- Corrective Land Use Measures
  - Examples include property acquisition and sound insulation
- Preventative Land Use Measures
  - Examples include compatible use zoning and noise standards in building codes
- Program Management (Implementation) Measures
  - Designed to assist with the implementation and management of the Noise Compatibility Program (NCP)
  - Examples include Airport staff dedicated to program management and outreach

JOHN GLENN INTERNATIONAL 38

38

Next Steps

Part 150 Process

- Review public comments
- Publish Draft Part 150 Noise Compatibility Program
- Public Hearing Winter 2020

JOHN GLENN INTERNATIONAL 39

39

How to submit questions or comments?

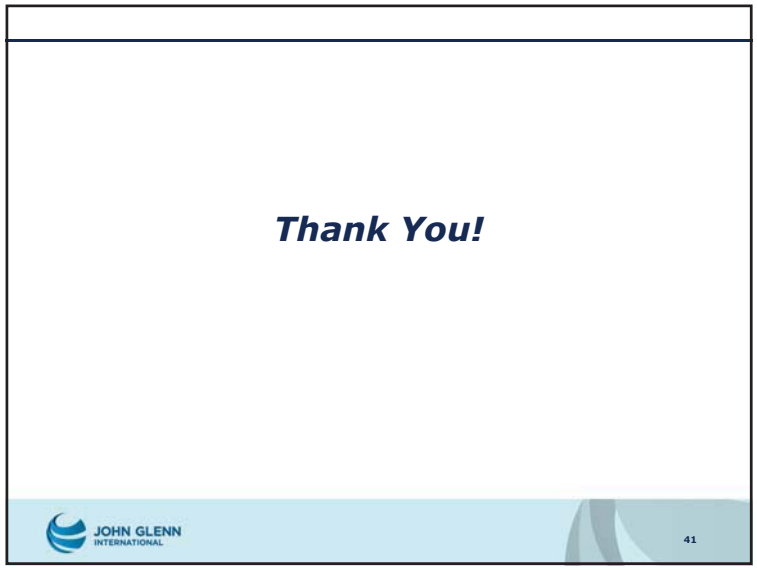
- Using the Q&A function during the meeting until 7pm
- Online: www.airportprojects.net/cmh-part150/contact
- Mail:

  Landrum & Brown
  Attn: Chris Sandfoss
  4445 Lake Forest Drive, Suite 700
  Cincinnati, OH 45242

- Please submit comments by October 2, 2020
- Printed copies of the presentation are available at the CRAA office by request
- A recording of this presentation will be available online following this meeting

JOHN GLENN INTERNATIONAL 40

40



41

JOHN GLENN COLUMBUS INTERNATIONAL AIRPORT

Part 150 Noise Compatibility Study

Public Workshop #2

September 2, 2020 (held online)

MEETING TRANSCRIPT

Marie Keister: Welcome, everyone. My name is Marie Keister and I'm with Engage Public Affairs and Murphy-Epson and I will be helping to moderate this evening. We're going to give a few more minutes for people to log in. But you are in the right place. If you want to hear about the Part 150 noise compatibility study for the John Glenn International Airport and the meeting will begin very soon.

So while you're waiting. I'm going to give you some logistics instructions in just a little bit. But while we wait for a couple more people to log in. I'll just note at the bottom of your screen that you have a Q and A box so while you are all muted today, you can write your question or your comments and then we'll be asking our panelists to respond. So I'll be watching those and we will be able to respond to those both in writing in and also verbally as well.

Okay, it's 5:02 so just introducing myself again. I am Marie Keister and I'm part of the Project Team and with me today is number of folks.

We have Justin Anderson, who is the Project Manager with Columbus Regional Airport Authority. We have Chris Sandfoss who you're going to hear from in just a little bit. He's the Project Manager for Landrum & Brown. He is also accompanied by Rob Adams with Landrum & Brown, and Gaby Elizondo. And so this is the group of folks, including Mark Kelby and Nick Hoffman, who are behind the scenes, who are here to support us and be able to answer any questions or comments you might have. So thank you so much for coming.

So you are here for the Part 150 Noise Compatibility Study and to kick us off, Justin Anderson will take it away.

Justin Anderson: Awesome, thanks. Marie and good evening, everybody.

Like Marie said, my name is Justin Anderson. I'm the Project Manager here at the Columbus Regional Airport Authority for the Part 150 Noise Compatibility Program Study

I really hope everyone is staying safe and healthy through these times. And before we begin, I truly just want to send out a big thank you for taking the time to join us tonight. I know we're all busy and I really want to thank you for hopping on and seeing what's happening at the Airport and what we're doing with our noise management service.

Typically these meetings would be held in a large room where the project team would be standing next to boards containing information from the project and the public would be able to walk around and ask questions about the project, face-to-face, but given our current restrictions, in an effort to mitigate the congregation of a large amount of people we opted to go virtual with this public information meeting.

Although we are in this virtual setting today. I do want the participants to feel free to ask questions and participate as much as possible through the Zoom's common functions which we will get into here shortly on how to do so.

So what are we doing here tonight. Well, this Project Team, which consists of the Columbus Regional Airport Authority, Landrum & Brown, which is an aviation planning consulting firm based out of Cincinnati, and also Murphy Epson in which is where Marie Keister is part of based here in Columbus, we are going to provide an update on the Part 150 Noise Compatibility Program study that is currently ongoing here at John Glenn Columbus International Airport.

Chris will be taking a deeper dive into what this study entails. But the goal for tonight is just to introduce the public to what this study is, provide the history of noise management at the Airport and discuss our current and future noise exposure here at John Glenn

Here at the Columbus Regional Airport Authority, one of our core values is to be a trusted community partner and we really want to be sure we live up to that during this project.

Again, I urge you to participate. If you have any questions or comments during this presentation, I hope you find tonight informational as you continue our efforts to determine the noise exposure at John Glenn

And all of today's material and a recording of the presentation can be found on the project's website starting sometime next week after we have time to review the transcript; although links to the project website will be found on the last page of this presentation. With that, I'll hand it back over to Marie to go over some media logistics.

Marie Keister: Thank you so much, Justin. And so you do have both a chat and a Q and A function on your screen.

We'd like to direct you to the Q and A function which is on the bottom.

And you open the window and you type your question in there. Rob Adams who you see on the screen is standing by to respond to those questions and so please use the Q and A function, not the chat function, however, I'll be monitoring both of those.

Just in case. And I already have a couple questions that have come in on the chat box those questions by the way, they're not as related to the noise study. So we'll hold those questions till the end and focus on the noise study first.

The other thing I want to make note of is that this is being recorded so as Justin said it will be posted later. But we wanted you to be aware of that.

Our timeframe is from five to seven tonight. But if we get done sooner then will still be standing by, even if the bulk of the presentation is over. So with that, I will turn it over to Chris

Chris Sandfoss: Thank you, Marie.

So just a quick overview of our Agenda for tonight **(see Slide #3)**, we've covered the meeting resources and the method for submitting questions and comments to the Q and A function next Justin will discuss the value of the John Columbus international Airport or CMH going by the three digit airport code; and some of the current highlights and things happening at CMH.

And then I'll get into the discussion of the noise compatibility study process; and the history of noise compatibility planning at CMH; and some of the data collection; for this ongoing study, as well as the, the draft noise exposure contours for the existing and future five year outlook conditions that have been developed for this study and are under review at this point.

And then we'll talk a little bit about some of the program management measures that are already in place at CMH; and talk about the next steps going forward for updating that that plan and finalizing and re approving that plan going forward.

So with that, I'll turn things back over to Justin to talk about some of the activities and recent things happening at CMH.

Justin Anderson: Thanks, Chris. So where are currently? Before we dive into the Part 150, I do want to highlight some notable statistics at CMH **(see Slide #4)**. 2019 was our busiest year ever handling over 8.6 million annual passengers, we were on a very similar trend. This year prior to the pandemic.

Pre pandemic, we were providing air service to about 247 destinations over an average of 160 daily departures.

These numbers here at CMH and across the nation have significantly dropped in the spring, and we are now serving around 36 destinations with an average of 61 daily departures. Although we are about 56% down in traffic from last year, averaging around 4,000 departing passengers a day.

We remain above the national average, which is about 71% down at other airports nationwide.

From an economic perspective CMH continues to be a major supporter to this local community based on our most recent economic impact study, we have generated roughly 33,360 jobs in the community; had about $1.7 billion in annual payroll and $5.3 billion in total economic impact. The Airport Authority has and always will strive to be a valuable asset to the community.

From a development standpoint, we are in the middle of two major construction currently in our midfield area projects **(see Slide #5)**, one being the 2,500-space consolidated a rental car facility which will house all of our rental car companies and rental car storage. This project has resulted in close to 1,600 construction jobs and is expected to open to the public and the third quarter of 2021

Additionally, we have the Residence Inn that's being constructed in the midfield area which will provide an additional lounging option for guests traveling to or from the Airport. The 122-guest suite hotel will open this fall.

And then, of course, with the pandemic, we are doing the best we can here at CRAA to make passengers feel comfortable enough to not only travel but use our facility when doing so **(see Slide #6)**.

We have been recently awarded the star accreditation for facility safety and cleanliness by GBAC, which is the Global Biorisk Advisory Council.

Due to our extensive extra efforts on keeping our facility clean and sanitized we have in the first facility which we are very proud of in Columbus, to receive this award. We're also taking the standard measures of social distancing through the terminal offering complimentary face masks and installing PPE vending machines. We really want to show that when you're ready to fly again we are ready to have you.

Now I'm going to turn it back to Chris. So we can start talking about noise and get into the Part 150 study

Chris Sandfoss: Okay, so the first thing I'm going to talk about is just what is a Part 150 study **(see Slide #7)** and why are we conducting a Part 150 Noise Compatibility Study. Now, some of you might remember the last time the Part 150 study was conducted at CMH was back in in 2007.

But I'll give a little bit more background for those of you that are less familiar with this process. So Part 150 refers to 14 CFR Part 150 of the Code of Federal Regulations, where the process and requirements for a noise compatibility study for an airport are laid out.

So we'll use that term Part 150 quite a bit. And so, you know, it comes from the Code of Federal Regulations.

A Part 150 Study is a process to identify airport noise and land use compatibility impacts through a planning process and it makes an airport eligible for certain funding for certain mitigation measures. Now the funding is not necessarily guaranteed. The funding is only contingent upon the availability of local match and federal grant access through the program.

Some of the elements of a Part 150 Study **(see Slide #8)** include the preparation of noise exposure maps or NEMs and these are the official maps, once approved become the official maps showing the noise patterns around the airport; and they're prepared for an existing condition and a future a condition that looks five years out based on a forecast of aviation activity.

One of the other components of a Part 150 study is a noise compatibility program or NCP which includes recommendations for reducing, minimizing, or mitigating aircraft noise impacts upon noise sensitive land uses.

An NCP is typically broken down into three main categories of measures noise abatement measures which address aircraft noise at the source, land use measures which address mitigating impacts upon the land uses or preventing introduction of new incompatible land uses in certain areas; and program management or implementation measures that assist with the operation and implementation and the day to day conduct of the actual measures.

And then one of the final elements is a public involvement process to gain public comment and input on the study; and this event tonight represents one of the steps in that public involvement process for this study.

Just a quick diagram that shows kind of the steps that we follow when conducting a Part 150 noise compatibility study **(see Slide #9),** and the steps are laid out for us in the regulations that that describe and guide us through the process that we must follow when conducting this study.

The study I should mention it is a voluntary study. Airports are not required to undertake a Part 150 study but airports like here at CMH have chosen to conduct the study and have a long history of conducting as such as this at CMH but again it is a voluntary process. The Airport Authority has decided to undertake and has continued to undertake for several decades.

So this current study we're right about in the middle of the study. We began this study late last fall with an initiation process that that included data collection and preparation of the forecast for the five year future noise contour. It included a noise monitoring program where we measured noise levels in the field. And then began to prepare the existing noise exposure contour and the future noise exposure contour. Now we're at the phase where we've reviewed the contours, the land use impacts and the current measures that were approved for the last study in 2007 and we're reviewing those measures and making recommendations for moving forward with existing measures and identifying potential new measures for inclusion in the study going forward.

So once that process is done. The measures that are recommended for inclusion after they go through this public review process and other stakeholder review will be packaged up into a draft Noise Compatibility Program that will be presented once again in an event, It'll likely be another online event like this, depending on whether or not we can have an in person meeting, that is yet to be seen if that will likely occur, towards the end of this year, where a draft study and document will be published for review and a public hearing will be held to take comment on the draft study prior to it being submitted to the Federal Aviation Administration with request for review and approval.

So I talked a little bit about the history of noise compatibility planning at CMH **(see Slide #10)**. And as Justin mentioned, it is a core goal to be proactively planning for the noise compatibility around the airport. The original study under the Port 150 regulation was conducted at CMH in 1987 and since then the Airport Authority has periodically updated the study in 1993, 1999, 2001, and then most recently in 2007. That 2007 study was conducted concurrently with the Environmental Impact Statement or EIS that analyzed the potential impacts for relocating the south runway. Back in 2007 or prior to 2007 there were plans to relocate that south runway to provide additional space between the runways and additional efficiency on the airfield.

That runway relocation was finalized and opened in late 2013. That runway was relocated approximately 700 feet further south from its original location so that Part 150 study in 2007 and EIS looked at the noise and other impacts of relocating that runway.

Some of the other measures that have been implemented over the course of the Part 150 noise compatibility studies **(see Slide #11).** since it was first started in 1987 at CMH include the residential sound insulation program. The Airport Authority, since that program has been implemented provided sound insulation packages to nearly 800 homes around the Airport.

There were an additional 35 homes that were identified for acquisition because they were in an area that was impacted by the relocation of South runway; and those homes relocated and relocation assistance was provided to the residents.

The Airport Authority also operates their flight tracking and noise measurement system called their WebTrak system, which includes 16 permanent noise monitors that measure noise levels around the airport, 24 hours a day, 365 days a year.

And there is a web component to that system where anyone can log on to the system and view the noise levels and see aircraft in basically real time as they fly to and from the Airport and see what the noise levels are of those aircraft as they overfly those 16 permanent noise monitors.

The system also records the data and has the ability to correlate the noise data to radar data and that data can be researched if there's ever a question or complaint about particular aircraft activity. The staff at the Airport Authority can research that and provide a response as to what caused the noise event or other information about that activity and the Airport Authority has dedicated staff to do that.

And this is part of the Airport Authority's proactive effort to be a good neighbor and respond to community concerns about noise and land use issues and also provide relevant information for decision makers for land use planning and future development around the Airport.

So the next few slides will just provide a little bit of background information about aircraft noise; what it means, what the experience is for people that live around the airport. This chart shows an example of some common indoor and outdoor sound levels in comparison to typical aircraft departures **(see Slide #12),** and as you can see at the top of the chart, one of the loudest events is a Boeing 747 takeoff. And now, Boeing 747s rarely operate at CMH, there are a few that may still operate at Rickenbacker as cargo aircraft but passenger airlines in the US phased those out as the for newer aircraft that are more efficient from a fuel burn standpoint. Some of the more common aircraft that you see at CMH are the Airbus A320 and Boeing 737-700 that are a little bit quieter than, than the 747 and maybe about as loud as a lawn mower, or a large diesel truck, or heavy urban traffic, and even maybe as loud as a blender or a vacuum cleaner that would be in use in in someone's home. So this is just to give a little bit of perspective about just how loud aircraft are on departure, as measured just two miles from the end of a runway.

And this graphic shows a comparison of some of the typical and historic aircraft events or aircraft types that have operated at CMH. It shows an example of eight different aircraft types and the noise

footprint that would be modeled by the computer noise model that is used to predict noise levels around an airport **(see Slide #13)**. The graphics of these aircraft include an Embraer 145, a CRJ-700 or 900, an Embraer 175, an Airbus A320, a Boeing 737-700 or 800 a Boeing 767, and an MD88. These all show the noise footprints from those aircraft types as if you're looking over top of the aircraft landing on the runway. So it would be an approach from the left-hand side of your screen and then a departure to the right-hand side of your screen. As you as you can see, for the most part, these aircraft get louder and louder is as you look down the list and some of the louder aircraft shown on this list are the Boeing 767-300 and the McDonnell Douglas MD-88. Those have been phased out of commercial fleets at CMH to no longer operate and they have been replaced with some of the quieter aircraft newer and quieter aircraft like the CRJ700 and the Embraer 175. And that's important when we get to looking at the noise exposure contours and comparing those back to noise exposure contours that were developed for previous studies will see that the reduction in noise from the phase out of some of these older louder aircraft has had an effect of reducing the size of the current contours at CMH.

So we'll talk a lot about the noise metrics and methodology for measuring and analyzing noise at the airport and one of the most important topics is the noise metric that is actually used for discussing noise impacts and generating the noise contours that will show here in a bit. And the metric that is used per federal requirement is called the Day-Night Average Sound Level or DNL **(see Slide #14)**. So we'll talk about DNL that's an acronym that you'll probably hear a lot throughout this study, but basically the DNL metric is the average noise level over a 24-hour period. So it basically takes all the noise from aircraft events, you'll have all the all the peaks when the events occur and then all the valleys when there is no aircraft event and it's averaged out over a 24-hour period. And typically for a noise study such as this, the DNL will represent an average-annual day. So all the aircraft activity over a 12-month period divided by 365 to get an average-annual day.

Now with the DNL there is an additional 10 decibel penalty that's applied to aircraft events or noise events that occur at night or between the hours of 10:00pm, and 6:59 am. That is to account for the additional annoyance of noise levels at night when people are home and generally sleeping. So because the decibel scale is logarithmic a penalty of 10 decibels is like counting an aircraft event as if it occurred 10 times.

As I mentioned, the DNL is the required metric to use for federal noise studies and it is the metric that the Federal Aviation Administration requires as well as other Federal agencies that recognize it as the preferred metric for federal noise and environmental studies, including the EPA and the US Department of Housing and Urban Development.

So the graphic in this slide just shows kind of a simple view of how the DNL metric is calculated. So you take all the noise levels of all the aircraft events that occur during that 24-hour period. You apply the nighttime penalty to any nighttime events after 10:00pm up through 6:59am and it's mathematically averaged over that 24-hour period to determine the actual DNL level of for a location or for an area.

So noise compatibility study also looks at land use and determines whether or not certain land uses are compatible with different levels of aircraft noise and based on the regulations contained in 14 CFR Part 150. This graphic shows a rough summary of the land use compatibility for different land uses or different land use types within different noise levels now based on federal guidelines that are that are currently in place **(see Slide #15)**. 65 DNL is the limit at which certain noise sensitive land uses are considered potentially incompatible without certain treatments or testing. All and uses under Part 150 guidelines are considered compatible with noise levels below 65 DNL. Certain residential uses would start to become incompatible with levels above 65 DNL without sound insulation. So a lot of residences can be sound insulated to reduce interior noise levels to below acceptable levels, per the federal guidelines; although mobile homes cannot be effectively sound

insulated so mobile homes are considered incompatible at levels above 65 DNL and then most other permanent residences would be considered incompatible at noise levels above 75 DNL.

Some other types of land uses also have noise compatibility guidelines under the Part 150 regulations. Most recreational uses are compatible up to 75 DNL. Although outdoor amphitheaters or music shells would be considered incompatible at levels above 65 DNL.

Some institutional uses or noise-sensitive public facilities such as schools, places of worship, other educational facilities, or medical facilities like hospitals and nursing homes would start to be considered incompatible levels at 65 DNL unless the construction of those facilities reduced interior noise levels to acceptable levels, which is generally around 45 decibels. And then, commercial and industrial and agriculture uses are typically compatible with noise levels above, up to and including 75 DNL with the exception that certain office uses where the public may congregate or public use would be considered or recommended to have some sound insulation or sounded attenuation within those areas that the public are received; and then any residential uses associated with a farm like a farm house would fall under the residential use category and would also be recommended to be a sound attenuated at or above 65 DNL.

So next, I'll talk a little bit about the methodology and process for generating the noise exposure contours that we'll show here tonight.

And the contours are generated using the computer noise model that's approved by the federal government and it's the, the current computer model is the FAA Airport Evironmental Design Tool or the AEDT **(see Slide #16)**. There's a great deal of data and input that goes into the AEDT model to generate a set of computer generated noise contours for an airport and that's the process that we've been conducting for the past several months. When this study began with collecting that data and input it into the noise model to prepare the noise contours following the guidance and requirements for generating those contours that are set forth by the FAA. So we look at a lot of data sources and collect data from a lot of various sources for input into the computer model, including airport layout, radar data that shows the aircraft in flight and flight tracks and aircraft types.

We look at data from the Official Airline Guide that provides data on commercial airline schedules that gives a lot of information about flight activity and the scheduled aircraft operations at CMH, as well as data from the FAA airport traffic control tower or a ATCT that provides an account of aircraft operations by aircraft type, time of day and the runway end that was used to and from the airport. So all that data is input into the computer model and the computer model the AEDT includes a database of over 5000 aircraft and it includes a very robust database of the performance of those aircraft in flight upon departure and arrival to an airport. So the data is plugged into the model and the model basically simulates how those aircraft fly and the noise levels that would be audible along the flight path of those aircraft to and from the airport and it outputs the set of computer noise contours as well as other information, tabular reports, and other data that are useful in in describing the noise conditions around the airport.

Some of the specific data collection for CMH which included the actual runway layout **(see Slide #17)**, and this is a graphic that shows the runway layout and airfield at CMH. For those of you that aren't familiar with how the airport is laid out there two parallel runways that run in an east-west direction and they're labeled based on the compass heading, if you assume that 360 degrees is due north then 90 degrees would be due east, 180 degrees would be to South, and 270 degrees would be to the west.

So the runways are labeled in 10-degree increments. So the runways at CMH are labeled 10 and 28, meaning there are approximately 100 degrees and 280 degrees, so almost not quite exactly east to west. And then the two runways are designated with an L and R for left and right. So at CMH you have runway 10 left / 28 right, is the runway on the north side and then you have runway 10 / right

28 left on the south side with the terminal in the midfield area in the middle. So if you're traveling to CMH from I-670 you get off on International Gateway and drive toward the terminal, you'd be in the midfield area and the two runways would be to your left and right, and this is the area that that Justin mentioned some of the new development is ongoing, including the consolidated rental car facility and the residence in right there in the midfield. Just, just a little bit west of the existing terminal.

So some of the other data we collect includes a lot of data on aircraft operations. And this is just a very high level summary of the number of aircraft operations that occurred during our baseline data collection period that will represent the existing noise exposure contour for conditions based on actual operating levels between September 2018 through August 2019 **(see Slide #18)**. And it's important to note that time period predates the slow down due to the COVID-19 pandemic so we thought it was important to continue using that data that was prior to the slowdown rather than using newer data that would show lower operating levels and thus lower noise levels. So this is a conservative approach to show noise conditions prior to the pandemic. So during that time period for our 2020 existing conditions, a total of 130,499 operations occurred at CMH. And for an average annual day when divided by 365 that results in approximately 370 average-annual day operations. So that would be the, the total input, the total number of operations that would be input into the computer model for the existing baseline noise exposure contour. And then we further break that down by the number of aircraft types by category and other factors like the time of day to apply the DNL penalty for aircraft operations that occur between 10:00pm and 6:59am; and other factors like runway use and flight tracks which I'll show some graphics that show those conditions as well.

So this is just a high level, but we break down the actual aircraft operations by actual aircraft types, the number 737-700, the number of a A-320s, so it gets it gets very detailed and once the actual document is published later this year, there'll be plenty of tables that show the actual detailed inputs into the noise exposure contour.

A similar effort is undertaken for the future noise exposure contour, although it's based on a forecast of aviation activity that was prepared for this study and looks five years out into the future to the year 2025 **(see Slide #19)**. And that forecast takes into account trends at the Airport, as well as economic conditions in the region and nationwide.

And similar to the existing contour the forecast was prepared for future conditions prior to the Outbreak. Therefore, it's, it's probably an over count of activity that may occur as we've seen aircraft activity has been reduced at CMH and around the country and it's likely to grow steadily, you know, once the outbreak is over but maybe a little bit lower conditions or operations may not reach the levels that we forecast, you know, five, five months ago to occur in 2025 but we decided to use this this forecast just to be conservative and overstate the noise, rather than understate the noise. Based on this forecast, it was expected that 150,140 total annual operations would occur in 2025 and when divided by 365 that equals approximately 411 average annual day operations. So, that that is the input number of operations that goes into the production of the future baseline noise exposure contour for 2025 conditions and then it's also broken down based on the forecast by aircraft type and other factors.

So we also looked at runway use which primarily comes from the radar data. And it's also based on radar data that shows actual flight operations and the runway that the aircraft landed to or took off from that baseline period of September 2018 through August 2019. And during that time period, the airport operated in one of two configurations either east flow or west flow. West Flow **(see Slide #20)**, meaning the aircraft landed from the east denoted by the, the green arrows on this map and then departed to the west noted by the blue arrows on this map. The airport operated in that configuration approximately 76 to 77% of the time in the baseline period. And that's further broken down by the percent of time each individual runway was used. So, of that 77% of departures in West flow, 38% used the North runway or departed off of runway 28 right, and approximately 39% departed off of 28 left

You see a similar split of arrivals to runway 28 right and left 35% of aircraft landed on 28 right and 41% of aircraft landed on runway 28 left.

And conversely, when the airport is in East Flow **(see Slide #21)**, meaning the aircraft are arriving from the west side of CMH and then departing to the west, which occurs approximately 23 to 24% of the time you'll see the breakdown or split of departures and arrivals to and from runways 10 left and 10 right.

And it's important to note that the direction of flow is primarily dictated by the wind patterns at CMH and in the Columbus region and the winds primarily come from the west and since aircraft need to take off into the wind to generate lift for departure, that's why the West flow configuration is used more often than the East flow configuration to maximize the benefits of the winds coming from the west so aircraft, get the most lift and get better efficiency upon departure.

So we also looked at actual flight tracks to see where aircraft were flying to and from upon approach and departure at CMH and this graphic shows a typical snapshot of aircraft flight tracks landing in West Flow **(see Slide #22)**. So, the green lines on the map show arrivals landing to runways 28 right and 28 left and then the blue line show departures from runways 28 right and 28 left in West flow. And we review this radar data and then input data into the computer noise model to represent these flight tracks. So we have wide coverage around the area and can actually model aircraft as they fly to and from the airport according to the density along each of these flight tracks. You see the flight tracks are very dense in the straight out pattern from the two runways and then you have various aircraft that are turned sometimes a little bit early, but for the most part they aircraft primarily maintain a straight out course for several miles to and from the runway ends at CMH.

You see a similar pattern, albeit a little bit less dense pattern, in East Flow because East flow operations occur less often **(see Slide #23)**. But you see the straight in approaches depicted by the green lines on the map from the west side heading eastward to land on runways 10 left and 10 right and then to departures into the East direction from runways 10 left and 10 right at CMH.

So we also conducted a noise monitoring or noise measurement program as part of this study and this this program was intended to verify the input data into the noise model to confirm that it was representing actual local conditions at CMH **(see Slide #24)**. I mentioned that the AEDT or the Aviation Environmental Design Tool includes a database of aircraft performance and noise for thousands of aircraft that are in use around the country and the input data into the model was verified to confirm that the actual single event noise levels that are predicted by the model that are modeled in the AEDT were accurate and reflected true real life conditions at CMH. So this noise measurement program was conducted during the week of November 11th. So again, it was, it was prior to the slow down from the COVID-19 Pandemic. The program included conducting noise measurements at approximately 30 sites around CMH for about an hour at each site **(see Slide #25)**. And this graphic shows the different locations, using the, the green dots on the map show the different locations from which aircraft noise measurements were taken around the airport on a short-term basis. And it also shows the location of the 16 permanent noise monitoring terminals around CMH depicted by the purple triangles. So as I mentioned, as part of the Airport's WebTrak system they maintain that system of 16 permanent noise monitors that record aircraft noise levels 365 days a year 24 hours a day continuously and provide that data that airport staff can review and research. And just a quick note if you count up the monitors or if you look at the numbers, they're numbered one through 12 and then 15 through 18, but noise monitors number 13 and 14 are at Rickenbacker International Airport. So there's 16 Noise monitors at CMH, but the numbering goes up to 18

Justin Anderson: Hey Chris, just real quick on this map. The short term noise monitors were placed strategically. We did also consider the location of where we were receiving a lot of noise complaints and we wanted to make sure that we captured those complaints by placing a monitor in or near that area. We also wanted to place these monitors next to land uses that are noise-sensitive, such as

residential, daycares, or schools. We wanted to place these monitors next to those facilities as well to see what type of noise exposure they were experiencing.

Chris Sandfoss: Yes, thank you, thank you, Justin. And as you see, we, we tried to map out a wide range of locations and get a wide dispersion of data collection and the, the land use is shown or generalized land uses shown as part of the base to this map and the light yellow color represents single family residential and you have multi family residential in the orange and kind of ochre colors and then other uses, industrial and commercial represented by the purple and red color so we definitely try to focus on some of the residential areas and some of the other noise sensitive uses. So why you don't see a lot of dots in the more heavily commercial and industrial areas.

So just a quick summary of results from that noise monitoring program **(see Slide #26)**, some of the louder aircraft that were recorded at any of the sites included the Boeing 737-800 and 900 and the Embraer 175 which was expected because those are two of the most common aircraft at CMH,

And as mentioned before, a lot of the older louder aircraft have almost been completely phased out of commercial fleets at CMH. The average number of aircraft events that was recorded and observed at each site for the short-term noise measurement program. Staff were on site and operated the equipment, the entire time we were out there. So we were able to observe what was going on and match up what was being recorded by the field noise measurement equipment we could actually match that to what we were seeing in the field and then further match that to the radar data. So the average number of operations or overflights that was observed and recorded at each site was approximately 11 1/2 or somewhere between 11 and 12 events per site. And some events were combined with community noise events such as traffic and dogs barking or other community and non-aircraft events and those events were taken into consideration when comparing the recorded noise levels to the noise model's calculation of single events by aircraft type and the results of that comparison showed that the measure data that was collected by the 30 short term sites and the 16 permanent noise monitors around CMH was consistent with the aircraft noise profiles in the Aviation Environmental Design Tool Model that is used to predict or generate the noise contours and that was important to confirm that the noise model is actually accurately predicting or was consistent with actual noise levels around the Airport.

So the next couple of slides will show the results of the noise contour modeling and the existing and future baseline noise contours that are still draft contours at this at this phase that have been generated for this study and will be submitted to the FAA to request review for approval.

This exhibit shows the Existing 2020 Noise Exposure Contour based on the baseline period through late 2019 prior to the COVID-19 slow down **(see Slide #27)**. The noise contour using the DNL metric is depicted by the solid and dotted blue lines on the map over top of the land use base map. The solid lines represent the 65, 70, and 70 DNL noise contours and remember 65 DNL is the level at which noise sensitive land uses are considered incompatible with aircraft noise. The 60 DNL is depicted using the dotted blue line, and it's shown here for planning purposes; although, below 65 DNL all uses are considered compatible. So the 60 DNL doesn't show that land uses are incompatible per Part 150 regulations, but it's just shown as a planning tool and for informational purposes, to show where the noise levels may be a marginal impact outside the 65 DNL, but does not show land uses that would be considered significantly impacted per Part 150 guidelines.

So we also do a count of the number of land uses that are noise sensitive within the (Existing 2020) Noise Contour within the different levels **(see Slide #28)**. The 65 to 70, the 70 to 75, and 75 plus DNL noise contours and as you can see on this chart. There's zero noise sensitive land uses within the 65 DNL of the existing noise exposure contour and that does represent a reduction from the number of noise-sensitive land uses including residences and other noise sensitive facilities that were in the contour for the 2007 study due to the reduction in some of the older louder aircraft that used to operate at CMH back in the mid-2000s.

So this graphic shows the noise contour the Baseline Noise Contour for the Future 2025 Conditions using the purple line so similar to the existing contour **(see Slide #29)**, this shows with the solid purple line, the, 65, 70, and 75 DNL for future 2025 conditions and then the dotted line shows the 60 DNL contour that shown for informational and planning purposes for future conditions overlaid over the same land use base map the contour also shows areas in the bright yellow outline that had been previously in sound insulated through the previous Airport Authority's residential sound insulation program. And as you can see that the sound insulation program boundary extended well beyond the 65 DNL contour for both existing and future conditions because as you'll see on one of the

next slides, the noise contours that that program was previously based on where a lot larger than they are for this study due to the phase out of older louder aircraft that have occurred at CMH.

So, similar to the existing baseline contour we prepared a chart of land use impacts within the Future 2025 Contour and there are a total of two housing units that would be located within the 65 DNL of the future contour **(see Slide #30)**, both on the east side of the airport, one of which was previously offered sound insulation and the owner of that house didn't respond or declined the offer. And then the other home is a newer home that was built after the previous contour was published, and would be expected to already attenuate sound based on newer construction techniques and would be considered ineligible for future sound insulation. There's also one daycare facility that was identified within the future noise exposure contour.

So this graphic shows a comparison of the Existing and Future 2025 Baseline Noise Exposure Contours **(see Slide #31)**. It shows the 60 DNL with the dotted blue and purple lines and the 65 DNL using the solid lines and as you can see and would expect the future noise exposure contour would grow slightly compared to the existing contour due to the forecasted increase in aircraft operations that were forecast to occur by the year 2025

And in comparison, this graphic shows the Existing (2020) Noise Exposure Contour compared to the Future (2012) Baseline Noise Exposure Contour that was prepared for the last Part 150 study in 2007 that was generated for a forecast condition expected to occur in 2012 **(see Slide #32)**, and that's depicted using the dotted and solid black lines on the map. And as you can see the 65 DNL of that contour was much larger than the noise exposure contour for our existing conditions for this study, and again, that is primarily due to the phase out of older louder aircraft that used to operate at CMH since the airlines have replaced some of those aircraft with newer, quieter aircraft. In addition, there's been some upgauging of aircraft at CMH where an airline that may have flown three operations of 50 seat jet maybe that's been replaced by one operation of a 150 seat jet to accommodate the same number of passengers with less operations, which also has an effect of reducing noise levels.

Justin Anderson: On this slide it's important to note that the 2012 65 DNL noise contour encompassed 5.2 square miles while the 2020 65 DNL noise contour encompassed 2.7 square miles. So our noise contours are shrinking, almost by half, due to the reasons that Chris has stated.

Marie Keister: Yeah, and I wanted to jump in because there have been some comments and questions about how noise affects certain locations in certain neighborhoods and so forth and Rob has been responding to those questions. And so I'm not going to recap them all right here, except to say that this map is going to be available online. And so you can study it in more detail if you like after the public meeting. And later on, everybody. I will recap verbally what those questions have been so everybody can hear that. But I, I'll do that later.

Chris Sandfoss: Thank you. So the next couple of slides do zoom in to some of the areas to the east and west of the airport, just to show kind of a close up look of the noise contours extending out from each of the four runways. And so this this particular slide shows the noise contour the existing and future baseline noise exposure contours of 65 DNL to the northeast of Columbus or around the

area of the intersection of 270; and you can see the noise contour the future, 65 DNL, barely extends out beyond I-270 near where the Techcenter drive overpass is at I-270 **(see Slide #33)**.

This map shows the southeast area of the contour a little bit south on I-270 **(see Slide #34)**. The contour extends a little bit further than the interstate primarily over commercial and industrial areas, but this is the area where there are two residences that have been identified that would be within the future 65 DNL for the future 2025 conditions near the intersection, or just south of the intersection Taylor Station Road and Claycraft Road.

And then as we zoom in to the west side of the Airport **(see Slide #35)**. This shows the northwest side near the area of Drake Road and Cassidy Avenue and as you can see the noise contour primarily remains over airport property depicted by the gray color on the map and just extends out over some of the commercial areas just west of the airport along the I-670 corridor **(see Slide #36)**.

And then a little bit further south on the southwest side, you can see the contour extends almost to 670 to the west of runway 10 right / 28 left and just north of the neighborhood around 13th and 12th Avenue just east of Cassidy Avenue **(see Slide #37)**.

So again, these maps will be online so that people can get a better look at them.

So now we'll talk a little bit about the next steps of the study and the process to update the noise compatibility program or NCP and now that we've generated the noise exposure maps and identified land use impacts or the lack of land use impacts within the 65, the next step is to identify the noise compatibility program measures that are recommended for carrying forward with through the study. The first step was to identify the existing measures that were developed for the previous studies and were approved or included in the, in the last NCP update in 2007, identify any measures that are recommended for continuation or any measures that have been completed and are no longer necessary and withdrawn, or any other modifications to the program.

So we talked a little bit about noise compatibility program measures and the different types of measures and measures basically fall into four main categories or three categories with a couple of subcategories **(see Slide #38)**. So you have noise abatement measures which include measures that address aircraft noise at the source; either measures that that affect aircraft operations or effect airport facilities such as preferential runway use, adjustment to flight track, adjustments to departure profiles and a lot of these measures are already in place at CMH and so we reviewed the effectiveness of those measures to determine if there are any changes warranted to those measures.

The next types of measures are land use measures and those generally fallen in two subcategories: corrective land use measures, which are sometimes referred to as remedial measures, which fix or correct existing land use incompatibilities. Example of that include property acquisition or sound insulation and as, as mentioned the Airport Authority has previously sound insulated nearly 800 homes around the Airport since the their residential sound insulation program began and also approximately 35 homes were acquired and the residents were relocated based on federal guidelines due to the relocation of the South runway that was completed in 2013.

Other land use measures include preventative measures which do just that they their intended to prevent the development of new incompatible uses around the Airport in areas where noise levels are elevated and examples of those measures include compatible use zoning, noise attenuation standards for building codes so new uses already reduced interior sound levels to below acceptable levels so new uses aren't incompatible with the noise levels around the Airport. And then the other type of measure that can be included in an NCP are the program management or implementation measures that just provide assistance to the Airport Authority with the management and implementation and monitoring of the program and provide elements for public outreach coordination and assistance in responding to requests and complaints from the public about the noise program

and noise conditions at the airport. So those are our basic types of noise compatibility program measures that that are under review.

The final or not final, but the draft noise compatibility program that includes all the recommended measures from the previous study that are recommended for carrying forward in this study plus any new measures will be packaged up into a document that will be available for public review likely later this year. And we're accepting public comments on the measures, any, any recommendations that we should look at during this study at this meeting tonight and through the rest of the year until those measures are published for additional public review sometime later this year. So the next steps in this process as I mentioned, we're accepting public comments on the conduct of the study and any recommendations that this study should look at for inclusion in the draft NCP that will be presented for final review and approval later this year **(see Slide #39)**.

We will likely have a public hearing to accept comments. Once that study is published likely early on in the winter or late in 2020

Depending on social distancing requirements, it's yet to be known if we'll be able to have an in-person meeting or if there'll be another online event like this where we can present information and gather public comments in a virtual online meeting and also accept comments by email and other means.

Marie Keister: So Chris, I want to, I want to give your voice a break a little bit and we've had a number of comments and questions so before we wrap up on additional information on how to submit and so forth, I'm going to read these questions that have been posted and ask them to share them I think they've been just great comments from the public who are listening in and we sure appreciate your participation.

So there's been a number of comments about people living in specific locations specific communities. And Dave asked questions about how do I register a noise complaint or is there a noise reducing strategy specific to my high level. Can you give some responses?

Rob Adams: So the Airport has a noise hotline that we can provide you that information. There's also the WebTrak system, which is a great tool that I posted the website address for that in the Q and A box to several requests. The WebTrak allows anyone to go online and review the flight tracks of specific aircraft, you can look at very specific time periods. You can see where you live in relationship to those aircraft, you can understand the altitude of the aircraft as well so you can you can get a lot of information. I think about what's happening through that, as well as the airports systems that they use for this for reporting noise and other information on their website and in terms of the programs that have been put in place.

This idea of Part 150 planning at the airport is not new, they've been conducting Part 150s for nearly 20 years, or maybe even over 20 years at this point and through that time there's been several different types of measures that have been put in place that Chris has gone through all of those are designed to help reduce noise or to help mitigate the impact of noise from aircraft.

So I know there was a lot of questions about what types of programs are being put in place and I think as we move through the study will be able to answer those questions a little more directly but know that there are several of those programs in place today and we're evaluating those as we speak, but we don't have any conclusions, we're just testing.

Marie Keister: Another question was about flight tracks potentially changing. In the last couple years there's one community that feels like they've seen more traffic over their homes in the last two years than they did before. Is there anything that is changed significantly in the operation the last two years that could account for that.

Justin Anderson: From an operational standpoint, our operations have gradually increased over the past couple of years. Operationally, the FAA dictates how the aircraft are going to arrive into and depart the Airport. As Chris mentioned earlier, the weather dictates the what direction aircraft will depart or arrive. Aircraft perform better taking off and landing into the wind. Once aircraft depart they are directed to designated corridors in the sky that are defined by the FAA. And then the same thing when arriving. They have corridors identified in the procedures that they will be flying into the Airport until they reach their assigned runway. Those haven't changed here at CMH in some time. We are working with the FAA Air Traffic Office right now on implementing what they call RNAV or RPN routes. Those routes are planned to be implemented in April 2021 and we went out to the public in the fall of 2017 to advise the public of these changes. A note on that though, those impacts won't be noticed from residences or businesses within a five to six nautical mile radius of the Airport.

Marie Keister: And then one last question and then Chris will continue.

Somebody wants to know what the status of the parking garages. So I'm not sure if Justin, you can answer that.

Justin Anderson: Yeah, I can. I can take care of that. So I'm assuming they're talking about the consolidated rental car facility which is currently under construction. We're looking to open in the third quarter of 2021. So it is well underway. We are excited about that. And we're going to be able to relocate the rental cars out to that new facility and we are going to be able to offer more parking space in our existing garage.

Marie Keister: Thanks, Justin. OK. Back to you, Chris.

Chris Sandfoss: Okay, so just wanted to go over the next steps and process to submit comments if you haven't submitted a comment tonight and think of something later on there's still time to get comments to us to be included as we consider updates to the Noise Compatibility Program. So if you are unable to submit a comment tonight. You can still go online to the website there and through there you can just submit a comment using the online form and that will be emailed directly to the Project Team **(see Slide #40)**.

Or you can even send comments in through the mail to my office address listed there. We'll accept written comments through the mail or emailed comments. We ask that you submit any comments, based on the presentations tonight by October 2 just to keep our study on schedule. And so that we can include and address those comments and consider those comments when we publish the actual draft noise compatibility study document and draft noise compatibility program later this year.

I think Marie mentioned that copy of the presentation and recording will be available on the website. So if you go to the website at airportprojects.net/CMH-part150 there's a page for the public meetings and there's a copy of the web, the presentation there as well as there will be a link to the recording of this presentation once that recording is available. so please get any additional comments to us by the beginning of October. If you have any and then look for information about a future event that will likely coincide with the publication of the draft Part 150 study document and NCP that will likely occur towards the end of this year and that will coincide with a another public meeting and public hearing to accept official comments on that plan. Once it is published for public review and comment and then once that Draft Part 150 study is published, and comments are received and addressed a final Part 150 study would be submitted to the Federal Aviation Administration likely in early 2021 with a request for review and approval of the updated plan. And once that plan is reviewed and approved by the FAA, It is anticipated though they'll accept the noise exposure contours after their review and those noise exposure contours will be become the official noise exposure maps for the Airport.

So with that, unless we have any other questions we're willing to stick around to see if there's any other any other questions come through, but just want to thank everyone for listening in and participating and providing their input on our study.

Marie Keister: So there are just a couple more questions. So here's another opportunity to jump in on that.

Somebody asked: There used to be a restriction on night flights in Columbus and what happened to that if that was the case, this person really does not like overnight flight and would like to know.

What restrictions might have been in the past.

Chris Sandfoss: I can answer that.

There is no prohibition on nighttime flights and that's per federal policy, the Airport must remain open 24 hours a day. You may hear about restrictions at other airports, particularly there's few airports in California and possibly one on Long Island in New York that have restrictions on nighttime flights, they basically have a curfew and those were grandfathered in before the federal government passed the law restricting those kind of nighttime curfews and it was a it was a federal law that was enacted as a trade off that that law also implemented the phase out requirement of some of the, the very old, the very loudest aircraft it phased out are required hush kitting of some of the 727s and DC9s that used to fly in the mid-90s and early 2000s. So right now, there's no restrictions on nighttime flights at CMH the airlines are that's up to their scheduling preference and when people want to fly.

Marie Keister: Justin, did you want to make a comment on that as well, or do you want me to go on to the next question.

Justin Anderson: Chris, you did a great job answering that I was just going to add on, you know, we do have in our current Noise Compatibility Program. We do have some recommended measures that pertain to preferential runaway use like Chris mentioned, but, you know, pilots they have the right to ask for operational need to use a runway and if it's going to improve the safety of the flight, usually the tower will give that preference to the pilot. So even if even if, if the measure is identified to use a certain runway, but a pilot needs to use the other one way for an operational need he'll be granted that right so that there may be some nights flights or some early departures in the morning that have occurred because of that operational need from pilots.

Marie Keister: Thanks, Justin.

Chris Sandfoss: And I'll mention that the DNL metric that's used for the study does apply that that penalty to nighttime flights because you know we're aware of that and the federal agencies that developed the methodology were aware that nighttime flights are more disruptive so that penalty it’s applied to nighttime flights when we prepare the noise contour so that that is also taken into account.

Justin Anderson: Thank you.

Marie Keister: And then there's this question. Not as much about the noise wanting to know the status of short term and long-term parking. So Justin the question is a little vague, but can you figure out

Justin Anderson: I'm going to assume that you are talking about the status of our parking lots. Right now, given the pandemic, our passenger numbers have been down as, as you've probably seen in the news and that's across the nation at all airports. So we have also closed some of our parking lots due to the lower numbers. Our Red Lot remains open as a long-term lot but our Blue Lot that has closed, but our short-term parking garage is also open as well.

Marie Keister: So there are a couple more questions about the map and the noise contour. And so, you know, some people have some very specific questions based on where they live. What I would suggest is that well, Rob. I'm going to call on you. What would you suggest I think your responses obviously, we're going to relay every one of your comments to Justin and the Airport Team. We will be responding to these questions, not only through the transcript but the meeting summary will also address the questions as well. Rob, Do you want to add anything to that.

Rob Adams: No, I mean I think just for the audience listening there's several comments about the experience that people are having at their homes, and I'll just sort of paraphrase. There's flights that are disruptive there there's you know that increase that recently, though, you know, those kinds of comments and then questions about why they hear a lot of aircraft at their house, but they're not inside the 65 DNL level, Why is that? So I think we can generally respond to those Marie as you suggested, and we certainly take that information as we are finalizing the noise contours and making sure that we're looking at all of the areas that people live. So, you know, we really want to focus on those areas, in particular, so that we're not missing anything. So, we appreciate the comments and we will try to respond as best we can individually, but that would be in later summary.

Marie Keister: Thank you. So really the content portion of the presentation this evening is completed and so we are still here, we're willing to answer questions. So I'm going back to the open question box to see what we haven't tackled yet. And by the way, there are some of you who are providing personal private information. And so we're going to respond to you, independently, so that we don't transmit your private information to everybody. And so we will, we are capturing those comments. The other thing is in the chat box, we have listed those links where you'll be able to find the this presentation and also provide additional comment until October 2nd.

All right, let's see here. Here's a new question. I understand what the day-night level contour does, but is there a peak there have been times when military aircraft have completely crushed the volume.

Justin Anderson: Chris, I can take, I can take a stab at this one. So we do have times when we do have a non-standard operation that the airport, you know, some especially with military aircraft and they will come into they'll come into CMH to refuel or to drop troops off and they'll fly the C130s or C17s. We have fighter jets to especially when there's an air show up in Cleveland, sometimes the Blue Angels like to stop by and fuel up at our FBO and then go to Cleveland, and those are extremely loud.

Justin Anderson: We do get noise complaints for those, but we do identify those as non-standard or unusual operations. We also have back in June, we had the gypsy mosquito spray, an aircraft that goes around the State of Ohio and that generates a lot of noise complaints, because it also is an aircraft that flies low and It just goes through the city and in a pattern that may not be ordinary for the average person who looks up. So there are some times when we do have unusual operations at the airport, that's just that sometimes are louder than the normal aircraft.

Chris, you want to get into how does, how does, how does that impact the DNL?

Chris Sandfoss: Yes, so since the DNL is an average. It doesn't mean that If you're outside of 65 DNL, let's say you live at 64 DNL, it doesn't mean that aircraft events won't exceed 64 decibels on a peak reading.

The DNL is a combined function of the loudness of the events and the number of events. So if you, if you look at, consider like a line graph, you'll have peaks on the graph. And you'll have valleys on the graph, And then you'll draw a line across, you know, straight line across the average to get your average. So that's your average but you have peaks that are above the average and then you'll have low points that are below the average so there, there would be some levels above 65 dB outside the

65 DNL contour because the DNL is both a function of the loudness of each event and the number of events.

Marie Keister: I'm going to shift to a noise abatement question that Rob already answered online. But let's cover it again. Is there a noise abatement on takeoff.

Rob Adams: Yes. So Marie since I answered it online, I'll go ahead and answer it again there is as part of the Airport's and Noise Compatibility Program that they've developed over the years, there are a number of things that that they have put in place to address aircraft noise, some of which are the noise abatement procedures. So there are flight procedures that dictate where aircraft will fly so that so they fly primarily runway heading, but then they have other options where they can fly.

And turn off of the end of the runway. But those locations had been selected to try to be as in the least populated areas as it can be.

There's also the runway use program that again, as was discussed; I think earlier during the early morning in particular and overnight trying to limit the use of the northern runway. There's also an east-west runway flow which is you know which direction they're departing, there are some preferences on that as well. So there are some things that are currently in the program to reduce noise that we would call noise abatement. There's some other on the ground facilities that help to reduce noise. There's barriers that that have been constructed for aircraft that are testing their engines while they're on the ground to help reduce the noise in the communities nearby. So there definitely are some things that have been done and you know we'll continue to look to see if those are still relevant. And if there needs to be additional ones through the study

Marie Keister: I think really we've covered the bulk of the questions and we had received some emails in advance, but they are very close to what we've already heard one comment we got was have the flight paths then relaxed over the last year and I think you already covered this Justin that you're working with the FAA on some of these things, but it goes on to say commercial jets have been cutting the path short mostly upon take off but also over our subdivision. So again, I think it comes back to what kind of changing patterns, you're seeing. And if you would just respond to that question again.

Justin Anderson: Yeah, so it's a pattern. A lot of the procedures that aircraft and pilots have to fly are dictated by the FAA and air traffic control. It is our job as the Airport to help make those procedures as safe as possible. And that's at the Airport as well as in the community too. So as part of this planning and as part of our overall effort of being a good neighbor. We work with our local cities and counties to help with development efforts to ensure land use is as compatible as possible to minimize noise impacting the surrounding community. From an operational standpoint, our procedures haven't changed in some time. Air traffic control may vector aircraft in times of convective weather or if pilots request to improve the safety or operation of the flight. In this case we don't have too much flexibility on revising these procedures.

Marie Keister: Great. Well, I don't see any new questions that we haven't already tackled either verbally or online and we've recap the themes that have come to us through the Q and A box; although a new question just popped up. So let me just look at that.

Marie Keister: Looking at the 2012 report, was any work done or picking up and starting again. So I'm not sure I entirely understand that question.

Maybe you do Rob or Justin.

Justin Anderson: Yeah, I can. So if we're talking about construction, since we did the last noise study and we did the environmental impact study for the relocation of runway when 10 right to 28 left was relocated the FAA put in our Record of Decision for that Environmental Impact Study that we would conduct a Part 150 noise study. So before we did that, before we did the Part 150 noise study, we decided to also rehabilitate the pavement our North runway, 10 left / 28 right, the one that sits near Gahanna.

So the FAA allowed us to wait until both runways were done with all the construction work before we did this Part 150 noise study. And that's where we are today. So we did the runway rehabilitation for runway 10 / left 28 right which finished up in 2016, so both of our runways are in good shape. so now we are studying the noise from our new our new layout. . We have done taxiways and we've redone payment on taxiways and aprons and those are projects that really aren't obvious to the average passengers, but we have done a lot of construction on pavement. So I'm hoping that answers that question. There was a reason why there was a gap between the 2007 study and this study.

Marie Keister: Great.

Justin Anderson: Great looks like that answer the question.

Marie Keister: Yeah, thank you.

Melanie who's asking great questions. We appreciate all these questions. Well, you know, I just watching that Q and A box to see if any other questions pop up.

If you have had your questions answered by all means, you know you're welcome to stick around till seven but you're also welcome to adjourn too. Either one is fine with us. Alright, let me look at another question. I think I think Melanie can keep us hopping with more questions so far away, Melanie, you got us till seven o'clock. So go for it. Now we'll just challenge her to see how quickly she can type

And maybe just to read it reiterate, you know, Justin's your guy, everybody. He is going to be doing a lot of the follow up on some of the specific questions that have come up and the website that posted on this slide that you see right now if you have, if you won't have any comment or if you want to set up a phone call.

Justin Anderson: Feel free to make a comment. We do have a comment section on this project website and those emails come straight to Chris and myself, and we will set something up with you to discuss, you know, if you want to discuss your property. Specifically, or if you want to discuss an overall scenario, the Airport or operational procedure. We'd be happy to do so. So if you if you think it'd be easier to do that. So there's one means of getting a hold of us through that project website. Another one is from the FlyColumbus.com on our website. Our noise hotline is on that website and we monitor that all the time. So feel free to submit a noise complaint through that and then we can get in touch with you.

Marie Keister: Chris, how are you doing? we've given you a little bit of a break on your voice. Now, but do you have anything to add, based on some of the questions.

Chris Sandfoss: I Don't have anything else to add, it looks like we've got another comment about a specific location.

Justin Anderson: Yeah, it looks like Hey Chris, can you know, can you go back to the slide where that's by Ohio Dominican University out on the northwest.

Chris Sandfoss: This slide shows Ohio Dominican **(see Slide #37)**. I think that's their property in the blue color just west of Airport Drive anything blue on the map is institutional. I think that's the eastern-most part of their campus. The contour in that direction the 65 DNL doesn't extend beyond Airport Drive. I can show the 60 DNL not zoomed in but so, so basically the Ohio Dominican campus is just above the I-670 highway shield on this map **(see Slide #35)**. So it would be, it would likely be within the or is within the 60 DNL, but outside the 65 DNL.

Marie Keister: And how far or close to Sunbury and Airport Drive. Answer that question.

Justin Anderson: Sunbury and Airport Drive those, those roads aren't located on the map. So I'm looking on Google Earth right now and seeing if I can give you a better answer.

Chris Sandfoss: I think this is Sunbury if you can see the blue annotations and then this I think is Airport Drive. So this is the area that I think the commenter is asking about approximately, but we'll have these maps will be on online and with some better, when the when the study is produced will have a lot more road labels. And people will have the ability to zoom in closer. We're kind of limited on how many labels we can show on this and still be able to see what's underneath.

Justin Anderson: Yeah, and that's why if we were if we were in face to face right now we would have a board that we had planned it didn't show a lot of the road label so we hope, hopefully we can get that that opportunity to do a face-to-face. At one point in our public hearing. But yeah, Chris. These will be online to help out and you can zoom in to your preference.

Marie Keister: Rob are there any other question I haven't reiterated

Rob Adams: No, I think you I think you've pulled out the ones that seem to be representative

Justin Anderson: All right, for those of you who are still on. We thank you for joining us tonight. Like, we're going to be here until 7:00 but we thank you we look forward to working with you guys as we continue as we proceed with this study.

Chris Sandfoss: I did see one question that we got by email. A couple days ago, I don't see the person that sent the email but it was asking about minimum altitude. And so I'll answer. Similar to the flight procedures and location of flight. The, the altitudes are part of the procedures and they're designed by FAA to maintain clearance from the ground as well as separation from other aircraft in flight. So yeah, those, those altitudes are going to vary by location distance from the airport in and slightly vary by, particularly on departure. They vary depending on the climb rate of the aircraft some aircraft can climate slightly quicker rate, but depending on the procedure, they're flying there's basically a window that they're trying to hit so they maintain the correct a vertical spacing depending on the procedure that they're flying.

Marie Keister: We received a nice comment thanking us for the meeting. I won't necessarily help their specific noise issue, but they appreciate understanding the research that goes in behind us. So thank you for that comment.

Marie Keister: And if you have any other observations about this webinar virtual meeting. We'd love to hear it. You know, I think we're all learning virtual meetings and so forth. So would love to just get your impressions of that as well.

Marie Keister: So we still have some people hanging in there and we appreciate the thank you' s. By the way, and if any of those who are still on with us or can think of a question or a comment. We'd love to see it.

Think I just got another one.

Oh thank you no technical issues, noticed with zoom during the meeting. Appreciate that. We all triple checked our sound before we got on board this evening.

Justin Anderson: So I see here that if you guys are on, any questions that we can answer please feel free to comment.

Marie Keister: Comment. So years ago there was a study done in the Brentnell area and Teakwood residents got doors and windows. I've been looking at where they're supposed to be equipment to test the levels. I think noise levels and have not found one very close to me as indicated, who can show me where this equipment is as it may have been there, years ago, but today it is not.

Marie Keister: So I think the question is where are the locations of those noise monitors and is there one in the Brentnell Teakwood area.

Justin Anderson: Chris, would you be able to go back to that map that you had on the monitoring locations **(see Slide #25).**

Chris Sandfoss: Yeah, I'm wondering if they're talking about the permanent monitors or the actual testing equipment that's used to test the interior levels to see if it meets the interior sound attenuation requirements, because that's pretty specific equipment. That was a pretty extensive eligibility testing that would have been done prior to the program implementation.

Justin Anderson: So looks like I'm looking at remember up by number four of the permanent monitors.

And looks like that's something the Brentnell Avenue area. That would probably be your closest one. And then we also had some short-term monitors as well. Number six, and 13 looks like those are up there for a couple of days as well. But yeah, if you're referring to what Chris was describing then I imagine I'm not sure.

Chris Sandfoss: There's a two-step process for determining eligibility and the first step is the land use within the 65 DNL But then there's, there's the additional into your testing and the prior programming implementation. Usually I a sample of residences are tested to see if they already reduce noise below that the 45 DNL interior level, and if not, where should the treatments be applied to the home to improve the performance of the attenuation of that the home for that they use similar equipment to what we use for the field noise monitoring program, but we actually will set up a speaker that will blast pink noise at the house or the residence and you'll test outside and inside to see what the difference is before the sound insulation and then after the sound insulation to see if it achieved what it was intended to achieve.

Marie Keister: Actually she's located very close to 17th and Joyce Avenue, so I think your answers have been helpful, but she may want to know, you know, if somebody could direct her, specifically, you know, and show her about equipment that might be helpful.

Justin Anderson: Yeah, we can we can give you the exact location of that permanent terminal.

Marie Keister: Right now there's a chance there's somebody that just joined us. And if that's the case, I just wanted to let you know that we've actually completed the full-blown presentation, which is also available online. And now we're answering questions and if you go to the Q and A box please, we encourage you to write your question or your comment down so we can really get to what issue is of concern to you. And then also, if you look at the answered questions, you'll see the other questions that have been asked this evening. All of this information will be transcribed and posted online. It may be a few days before we can make sure you know and the transcript is done

automatically through the technology, you have to go and clean it up because sometimes the technology misinterprets words. So we have to get that done. But then everything will be available online. The presentation is actually online now.

Marie Keister: Just another comment that the planes do seem to be too close. So we appreciate your comment.

So we have about seven minutes left, so please let us know if you have any other questions and comments.

Chris Sandfoss: And I'll go back to the slide that shows how you can submit comments **(see Slide #40)** after tonight.

Marie Keister: Perfect.

Marie Keister: Yeah, so this is now your last chance you have until October 2 so if you're the type of person that really wants to study the slides and see what additional questions or comments you might have. We encourage you to do that. We encourage you to share this information with your friends. They are welcome to go online as well. And I think by next week we'll have the recorded version on there as well.

Marie Keister: So we just have maybe another 60 seconds if you want to post a question; we might have time to just answer. One last one.

Alright, so not seeing any final questions. I think I just want to thank all of our panelists, Justin. Thank you, too, for giving direct instructions on how to get ahold of you as well. And Chris and Rob and mark and Nick behind the scenes and Gaby. So thank you very much, everybody. Have a great evening.

Justin Anderson: Thank you guys very much.

This page intentionally left blank

Public Information Meeting #3 / Public Hearing
July 29, 2021

Newspaper Notices

Online Presentation

Meeting Summary

Public Hearing Transcript

Public Comments

Responses to Comments

This page intentionally left blank

The Columbus Dispatch
PROOF OF PUBLICATION

STATE OF OHIO, FRANKLIN COUNTY. SS:

Steve Vacolas
Credit Manager

The Columbus Dispatch, a newspaper published at Columbus, Franklin County, Ohio, with a daily paid Circulation of over 130,000 copies, personally appeared and made oath that the notice of which a true copy is here unto attached was published in
The Columbus Dispatch for 1 time(s) on
June 21, 2021.

and that the rate charged therefore is the same as that charged for commercial advertising for like services.

DocuSigned by:
Steven Vacolas
6FBC8C6110EE476...

subscribed and Sworn on this 21st day of June 2021 as witness my hand and seal of office.

Veronica Hill
NOTARY PUBLIC - STATE OF OHIO

NOTARIAL SEAL
STATE OF OHIO

VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023

Legal Notice
John Glenn Columbus International Airport
Draft Part 150 Noise Compatibility Study and Public Hearing

The Columbus Regional Airport Authority (CRAA) will hold a Public Meeting/Hearing regarding the Part 150 Noise Compatibility Study Update being conducted for the John Glenn Columbus International Airport. The Meeting/Hearing will be held from 5:30 p.m. to 7:00 p.m. on July 28, 2021. The Public Meeting /Hearing will be conducted virtually through online communication software. Pre-registration is required to participate in the Virtual Public Meeting/Hearing. Register in advance and submit comments at www.airportprojects.net/cmh-part150/home/public-meetings/.
Comments received at the Public Hearing will become part of the Final Part 150 Study Noise Compatibility Study Update Report to be submitted to the Federal Aviation Administration (FAA) for review. CRAA has published a Draft Part 150 Study Noise Compatibility Study Update Report. Copies of this report will be available for public review beginning June 22, 2021, at the following locations:
- Columbus Regional Airport Authority, John Glenn Columbus International Airport, Administrative Offices, 4600 International Gateway, Columbus, OH 43219. Please call (513) 818-0617 to set up an appointment.
- Columbus Metropolitan Library - Main Branch, 96 South Grant Avenue, Columbus, OH 43215, (614) 645-2275
- Columbus Metropolitan Library - Gahanna Branch, 310 Hamilton Road, Gahanna, OH 43230, (614) 645-2275 – Note temporary location opening on June 28th
- Columbus Metropolitan Library - Linden Branch, 2223 Cleveland Avenue, Columbus, OH 43211, (614) 645-2275
- Columbus Metropolitan Library – Martin Luther King Branch, 1467 East Long Street, Columbus, OH 43203, (614) 645-2275
- Columbus Metropolitan Library - Reynoldsburg Branch, 1402 Brice Road, Reynoldsburg, OH 43068, (614) 645-2275
- Columbus Metropolitan Library - Shepard Branch, 860 North Nelson Road, Columbus, OH 43219, (614) 645-2275
- Columbus Metropolitan Library - Whitehall Branch, 4445 East Broad Street, Columbus, OH 43213, (614) 645-2275
- Bexley Public Library, 2411 East Main Street, Columbus, OH 43209, (614) 231-2793
- Online: www.airportprojects.net/cmh-part150/home/documentsreports/

Comments on the Draft Part 150 Study Noise Compatibility Study Update Report may be submitted to: Chris Sandfoss, Project Manager, Landrum & Brown, 4445 Lake Forest Drive, Suite 700, Cincinnati, OH 45242, or by email to: CMH-P150@landrumbrown.com. All comments must be received by August 13, 2021. If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact (513) 818-0617 by July 23, 2021.
6/21

CLASSIFIEDS

email your ad to 8888888@dispatch.com or call 614-888-8888

Equal Housing Notice

PUBLISHER'S NOTICE
Equal Housing Opportunity

All real estate advertising in this newspaper is subject to the Fair Housing Act which makes it illegal to advertise "any preference; limitation or discrimination." Familial status includes children under the age of 18 living with parents or legal custodians, pregnant women and people securing custody of children under 18. This newspaper will not knowingly accept any advertising for real estate which is in violation of the law. Our readers are hereby informed that all dwellings advertised in this newspaper are available on an equal opportunity basis.

To complain of discrimination, call HUD toll-free at 1-800-669-9777. The toll-free telephone number for the hearing impaired is 1-800-927-8275.

Homes Sale NW

★★★★★★★★★★

CHECK YOUR AD

Please check your ad on the first day it appears in the paper to make sure everything is correct. Sometimes instructions over the phone are misunderstood and an error can occur in your ad. If this happens please contact us the first day your ad appears and we will be happy to fix it as soon as we can.

We appreciate your business
The Columbus Dispatch

★★★★★★★★★★

Leisure Vacation Resort

★★★★★★★

CHECK YOUR AD

Please check your ad on the first day it appears in the paper to make sure everything is correct. Sometimes instructions over the phone are misunderstood and an error can occur in your ad. If this happens, please contact us the first day your ad appears and we will be happy to fix it as soon as we can.

We appreciate your business
The Columbus Dispatch

★★★★★★★

Real Estate Services

NOTICE
LENDING OPPORTUNITIES
********NOTICE********
Think First, Borrow Smart. Contact the Ohio Division of Financial Institutions' Office of Consumer Affairs BEFORE you refinance your home or obtain a mortgage. BEWARE of requests for any large advance payment of fees or insurance. Call the Office of Consumer Affairs toll free at 1-866-278-0003 to learn if the mortgage broker or lender is properly licensed.
This notice is a public service of
The Columbus Dispatch

Business Opportunity

****NOTICE****
Investigate before you invest.
Call the Ohio Division of Securities BEFORE purchasing an investment. Call the Division's Investor Protection Hotline at 800-788-1194 to learn if the investment is properly registered and if the seller is properly licensed. (This notice is a public service of The Columbus Dispatch.)

Public Notices

Public Bid Advertisement
(Electronic Bidding)

OSU-190008
Road and Bridge Improvements, FY19-Bid Package No-03
The Ohio State University
Columbus, Franklin

Bids Due: 2:30 local time, 07/06/2021; through the State's electronic bidding system at https://bidexpress.com

EDGE Participation Goal: 5% of contract

DOMESTIC STEEL USE IS REQUIRED PER ORC 153.011.

Contract	Estimated Cost
General Contract	$438,392.00

Pre-bid Meeting: June 28, 2021, at 2: 30 P.M until approximately 4:00 P.M
Email: Ekegren.3@osu.edu
To be added to the SKYPE call or call614-668-1100 and use code 1922349#

Bid Documents: $120.00 each set (no refund) from Star Consultants, Inc., 1910 Crown Park Court, Columbus, Ohio 43235, Phone: (614) 538-8445, facsimile number: (614) 538-8446, contact name (Hamid Mukhtar) and e-mail address (Hamid@starconsultants.org), and electronically at https://bidexpress.com.

More Info: Associate contact: Star Consultants, Inc., Hamid Mukhtar, 1910 Crown Park Court, Columbus, Ohio 43235, Phone: 614-538-8445, Fax: 614-538-8446 or email: Hamid@starconsultants.org OSU contacts: Technical- Tom Ekegren, OSU Project Manager, phone number, 614.247.0017and Administrative- OSU Contracts Administrator, Cathy Dalton, dalton.191@osu.edu.

The Board of Trustees of The Ohio State University reserves the right to waive any informalities or to reject any or all bids.
6/16, 21, 30

The Healthcare Center at The Forum at Knightsbridge, located in Columbus Ohio, announces with regret that it has notified the Ohio Department of Health and the Centers for Medicare & Medicaid Services Regional Office of its decision to close its skilled nursing unit and to voluntarily terminate its participation in the Medicare program.

The Healthcare Center at The Forum at Knightsbridge has taken all appropriate steps to notify residents, families and staff of the closure and, guided by state and federal guidelines, is working closely with residents and family members to ensure the transition of each resident to an appropriate alternative care location. The safety and security of residents is our foremost priority.

The skilled nursing unit will remain open until all residents are transferred, and it is no longer accepting new residents. Residents may obtain copies of their records from The Healthcare Center at The Forum at Knightsbridge by contacting Rebecca Converse at 4590 Knightsbridge Blvd. Columbus Ohio 43214 or 614-451-8783.
6/16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 7/1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15

Public Notices

Legal Notice
John Glenn Columbus International Airport
Draft Part 150 Noise Compatibility Study and Public Hearing

The Columbus Regional Airport Authority (CRAA) will hold a Public Meeting/Hearing regarding the Part 150 Noise Compatibility Study Update being conducted for the John Glenn Columbus International Airport. The Meeting/Hearing will be held from 5:30 p.m. to 7:00 p.m. on **July 29, 2021**. The Public Meeting /Hearing will be conducted virtually through online communication software. Pre-registration is required to participate in the Virtual Public Meeting/Hearing. Register in advance and submit comments at: www.airportprojects.net/cmh-part150/home/public-meetings.
Comments received at the Public Hearing will become part of the Final Part 150 Study Noise Compatibility Study Update Report to be submitted to the Federal Aviation Administration (FAA) for review. CRAA has published a Draft Part 150 Study Noise Compatibility Study Update Report. Copies of this report will be available for public review beginning **June 22, 2021**, at the following locations:
- Columbus Regional Airport Authority, John Glenn Columbus International Airport, Administrative Offices, 4600 International Gateway, Columbus, OH 43219. Please call (513) 818-0617 to set up an appointment.
- Columbus Metropolitan Library - Main Branch, 96 South Grant Avenue, Columbus, OH 43215, (614) 645-2275
- Columbus Metropolitan Library - Gahanna Branch, 310 Hamilton Road, Gahanna, OH 43230, (614) 645-2275 – Note temporary location opening on June 28th
- Columbus Metropolitan Library - Linden Branch, 2223 Cleveland Avenue, Columbus, OH 43211, (614) 645-2275
- Columbus Metropolitan Library – Martin Luther King Branch, 1467 East Long Street, Columbus, OH 43203, (614) 645-2275
- Columbus Metropolitan Library - Reynoldsburg Branch, 1402 Brice Road, Reynoldsburg, OH 43068, (614) 645-2275
- Columbus Metropolitan Library - Shepard Branch, 850 North Nelson Road, Columbus, OH 43219, (614) 645-2275
- Columbus Metropolitan Library - Whitehall Branch, 4445 East Broad Street, Columbus, OH 43213, (614) 645-2275
- Bexley Public Library, 2411 East Main Street, Columbus, OH 43209, (614) 231-2793
- Online: www.airportprojects.net/cmh-part150/home/documentreports/

Comments on the Draft Part 150 Study Noise Compatibility Study Update Report may be submitted to: Chris Sandbos, Project Manager, Landrum & Brown, 4445 Lake Forest Drive, Suite 700, Cincinnati, OH 45242; or by email to: CMH-P150@landrumbrown.com. All comments must be received by August 13, 2021. If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact (513) 818-0617 by July 23, 2021.
6/21

Public Bid Advertisement
(Electronic Bidding)

OSU-210176
Arps Hall – Rms 168T, 176T and 180T Improvements
The Ohio State University
Columbus, Franklin County

Bids Due: 2:00 p.m. local time, June 29, 2021; through the State's electronic bidding system at https://bidexpress.com

EDGE Participation Goal: 5% of contract

DOMESTIC STEEL USE IS REQUIRED PER ORC 153.011.

Contract	Estimated Cost
General Contract	$271,240.00 (Est Base Bid)

Pre-bid Meeting: Wednesday, June 16, 2021 at 11:00 a.m. – 12:00 p.m., in the first floor main lobby of Arps Hall, 1945 N. High Street, Columbus.

Bid Documents: $100.00 each set (no refund) from Key Blue Print, 195 E. Livingston Ave, Columbus, OH 43215, 614-228-3285 or 800-537-1907, and www.plankey.com, and electronically at https://bidexpress.com.

More Info: Associate contact: Kevin Miller, 614-224-9743, and kmiller@millerwatson.com. OSU contacts: Technical- Ken Garrett, 614-292-0328, and Administrative- Melissa Baker, 614-247-1523, FAX: 614-292-2539.

The Board of Trustees of The Ohio State University reserves the right to waive any informalities or to reject any or all bids.
6/7, 14, 21

DISPATCH CLASSIFIEDS
614-888-8888

Public Notices

NOTICE

KALER RAE BLAIR

The State of Tennessee, Department of Children's Services, has filed a Petition for Termination of Parental Rights as to Addisin Rose Blair. It appears that ordinary process of law cannot be served upon you because your whereabouts are unknown. You are hereby **ORDERED** to serve upon Jill Marsee, Attorney for the Tennessee Department of Children Services, 400 Hearthwood Court, Cookeville, Tennessee 38506, (931) 646-3010, an Answer to the Petition for Termination of Parental Rights filed by the Tennessee Department of Children Services, within thirty (30) days of the last day of publication of this notice, and pursuant to Rule 39(e)(1) of the Tenn. R. Juv. P. you must also appear in the Circuit Court of Cumberland County, Tennessee at Crossville, Tennessee on the 1st day of September, 2021, at 9:00 a.m., for the Hearing on the Petition for Termination of Parental Rights by the State of Tennessee, Department of Children's Services. If you fail to do so, a default judgment will be taken against you pursuant to Tenn. Code Ann. § 36-1-117(n) and Rule 55 of the Tenn. R. of Civ. P. for the relief demanded in the Petition. You may view and obtain a copy of the Petition and any other subsequently filed legal documents at the Circuit Court Clerk's Office, Cronville, Tennessee.
6/14, 21, 28, 7/5

NOTICE TO BIDDERS STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
Columbus, Ohio
Division of Construction Management

Legal Copy Number: **210426**

Sealed proposals will be accepted from pre-qualified bidders at the ODOT Office of Contracts until 10:00 a.m. on July 15, 2021. Project 210426 is located in Franklin County, IR 270/IR 70 SP FY22 Concrete and is a SPOT PATCHING / PAVEMENT REPAIR project.

The date set for completion of this work shall be as set forth in the bidding proposal. Plans and Specifications are on file in the Department of Transportation.
6/14, 21

Information

★★★★★★★

CHECK YOUR AD

Please check your ad on the first day it appears in the paper to make sure everything is correct. Sometimes instructions over the phone are misunderstood and an error can occur in your ad. If this happens, please contact us the first day your ad appears and we will be happy to fix it as soon as we can.

We appreciate your business
The Columbus Dispatch

★★★★★★★

GS-Northwest

ANNOUNCE THIS! SPECIAL CELEBRATION
The Celebrations! Page runs every Sunday in the Arts/Life Section. There are three packages to choose from, Gold, Silver, and Bronze. Laminations are $5.00 each. Call 614-888-8888, Mon.-Fri., 8am-5pm to request a packet or visit our web page at dispatch.com/celebrations to download the forms and view the packages and requirements. Ads must be received by NOON the Monday preceding publication.

Auctions-Public Sale

HIGH END HOBBY SHOP LIQUIDATION AUCTION
WOODWORKING EQUIPMENT - Weinig Molder, Weinig Grinder, sanders, saws, dovetail machine and more! At: AbsoluteAuction!! Online and Phone bidding only! Tuesday June 22nd at 12 PM.
Call Dan at 330.760.9479
Visit: https://www.brightstar.auction/Hobbyshop for a complete catalog and more information.

Dogs for Sale Wanted

SCHNAUZER PUPPIES - AKC reg. full blgd, grandchp. Tails docked/dewclaws, black M& F, fun loving & playful, reserve your future best friend today, 3 wks. old, placement in July, 1st shots, vet certified. Call/text 614-316-1512.

RVMotorHomes Travel

2004 FOREST RIVER - This is in Excellent Overall Condition Must See to Appreciate Non Smoker No Pets the interior is Super Clean. $7,000. Serious Inquiries only. (330)933-7470

Get Paid!
Need a car?
Rent money?
Bills due?
Deliver a Dispatch and/or TheBAG route and get paid every week. It's early morning newspaper delivery. All you need is a reliable vehicle and a valid driver's license.
Call us to start delivering the Dispatch and/or TheBAG
(614) 571-4009

COLUMBUSCEO invites you...
wise
WOMEN OF INSPIRATION
SUMMIT EXPERIENCE
WEDNESDAY, JUNE 23
& THURSDAY, JUNE 24
36 SPECTACULAR SPEAKERS
33 INSPIRATIONAL SESSIONS
SIX CITIES · TWO DAYS
9:00AM-12:30PM EACH DAY
Details at
https://bit.ly/WISEWOMEN2021
cypclub BRANCH BARNES & THORNBURG LLP DISCOVER

A FRESH REWARD
GET A FREE
16 oz Coffee
or
20 oz Fountain Drink
BUY
The Columbus Dispatch
Sweet victory in Sugar Bowl rout
Postmaster says move caught him by surprise
Duchess
Duchess
at participating Duchess Shoppe stores
Offer valid from June 9 – August 7

Murphy Epson

Reynoldsburg News
PROOF OF PUBLICATION

STATE OF OHIO, FRANKLIN COUNTY. SS:

Steve Vacolas
Credit Manager

Reynoldsburg News, a newspaper published at Columbus, Franklin County, Ohio, with a weekly Circulation, personally appeared and made oath that the notice of which a true copy is hereunto attached was published in *Reynoldsburg News* 1 Time(s) on June 24, 2021

and that the rate charged therefore is the same as that charged for commercial advertising for like services.

Steve Vacolas

subscribed and Sworn on this 24th day of June, 2021 as witness my hand and seal of office.

Veronica Hill

NOTARY PUBLIC - STATE OF OHIO

NOTARIAL SEAL
STATE OF OHIO

VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023

Legal Notice
John Glenn Columbus International Airport
Draft Part 150 Noise Compatibility Study and Public Hearing

The Columbus Regional Airport Authority (CRAA) will hold a Public Meeting/Hearing regarding the Part 150 Noise Compatibility Study Update being conducted for the John Glenn Columbus International Airport. The Meeting/Hearing will be held from 5:30 p.m. to 7:00 p.m. on **July 29, 2021.** The Public Meeting /Hearing will be conducted virtually through online communication software. Pre-registration is required to participate in the Virtual Public Meeting/Hearing. Register in advance and submit comments at: www.airportprojects.net/cmh-part150/home/public-meetings/. Comments received at the Public Hearing will become part of the Final Part 150 Study Noise Compatibility Study Update Report to be submitted to the Federal Aviation Administration (FAA) for review. CRAA has published a Draft Part 150 Study Noise Compatibility Study Update Report. Copies of this report will be available for public review beginning June 22, 2021, at the following locations:
- Columbus Regional Airport Authority, John Glenn Columbus International Airport, Administrative Offices, 4600 International Gateway, Columbus, OH 43219. Please call (513) 818-0617 to set up an appointment.
- Columbus Metropolitan Library - Main Branch, 96 South Grant Avenue, Columbus, OH 43215, (614) 645-2275
- Columbus Metropolitan Library - Gahanna Branch, 310 Hamilton Road, Gahanna, OH 43230, (614) 645-2275 – Note temporary location opening on June 28th
- Columbus Metropolitan Library - Linden Branch, 2223 Cleveland Avenue, Columbus, OH 43211, (614) 645-2275
- Columbus Metropolitan Library – Martin Luther King Branch, 1467 East Long Street, Columbus, OH 43203, (614) 645-2275
- Columbus Metropolitan Library - Reynoldsburg Branch, 1402 Brice Road, Reynoldsburg, OH 43068, (614) 645-2275
- Columbus Metropolitan Library - Shepard Branch, 850 North Nelson Road, Columbus, OH 43219, (614) 645-2275
- Columbus Metropolitan Library - Whitehall Branch, 4445 East Broad Street, Columbus, OH 43213, (614) 645-2275
- Bexley Public Library, 2411 East Main Street, Columbus, OH 43209, (614) 231-2793
- Online: www.airportprojects.net/cmh-part150/home/documentsreports/

Comments on the Draft Part 150 Study Noise Compatibility Study Update Report may be submitted to: Chris Sandfoss, Project Manager, Landrum & Brown, 4445 Lake Forest Drive, Suite 700, Cincinnati, OH 45242; or by email to: CMH-P150@landrumbrown.com. All comments must be received by August 13, 2021. If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact (513) 818-0617 by **July 23, 2021.**

6/24 Reynoldsburg News

6283269

Murphy Epson

Bexley News
PROOF OF PUBLICATION

STATE OF OHIO, FRANKLIN COUNTY. SS:

Steve Vacolas
Credit Manager

Bexley News, a newspaper published at Columbus, Franklin County, Ohio, with a weekly Circulation, personally appeared and made oath that the notice of which a true copy is hereunto attached was published in *Bexley News* 1 Time(s) on June 24, 2020

and that the rate charged therefore is the same as that charged for commercial advertising for like services.

Steve Vacolas

subscribed and Sworn on this 24th day of June, 2020 as witness my hand and seal of office.

Veronica Hill

NOTARY PUBLIC - STATE OF OHIO

NOTARIAL SEAL
STATE OF OHIO

VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023

Legal Notice
John Glenn Columbus International Airport
Draft Part 150 Noise Compatibility Study and Public Hearing

The Columbus Regional Airport Authority (CRAA) will hold a Public Meeting/Hearing regarding the Part 150 Noise Compatibility Study Update being conducted for the John Glenn Columbus International Airport. The Meeting/Hearing will be held from 5:30 p.m. to 7:00 p.m. on **July 29, 2021**. The Public Meeting /Hearing will be conducted virtually through online communication software. Pre-registration is required to participate in the Virtual Public Meeting/Hearing. Register in advance and submit comments at: www.airportprojects.net/cmh-part150/home/public-meetings/. Comments received at the Public Hearing will become part of the Final Part 150 Study Noise Compatibility Study Update Report to be submitted to the Federal Aviation Administration (FAA) for review. CRAA has published a Draft Part 150 Study Noise Compatibility Study Update Report. Copies of this report will be available for public review beginning June 22, 2021, at the following locations:
- Columbus Regional Airport Authority, John Glenn Columbus International Airport, Administrative Offices, 4600 International Gateway, Columbus, OH 43219. Please call (513) 818-0617 to set up an appointment.
- Columbus Metropolitan Library - Main Branch, 96 South Grant Avenue, Columbus, OH 43215, (614) 645-2275
- Columbus Metropolitan Library - Gahanna Branch, 310 Hamilton Road, Gahanna, OH 43230, (614) 645-2275 – Note temporary location opening on June 28th
- Columbus Metropolitan Library - Linden Branch, 2223 Cleveland Avenue, Columbus, OH 43211, (614) 645-2275
- Columbus Metropolitan Library – Martin Luther King Branch, 1467 East Long Street, Columbus, OH 43203, (614) 645-2275
- Columbus Metropolitan Library - Reynoldsburg Branch, 1402 Brice Road, Reynoldsburg, OH 43068, (614) 645-2275
- Columbus Metropolitan Library - Shepard Branch, 850 North Nelson Road, Columbus, OH 43219, (614) 645-2275
- Columbus Metropolitan Library - Whitehall Branch, 4445 East Broad Street, Columbus, OH 43213, (614) 645-2275
- Bexley Public Library, 2411 East Main Street, Columbus, OH 43209, (614) 231-2793
- Online: www.airportprojects.net/cmh-part150/home/documentsreports/

Comments on the Draft Part 150 Study Noise Compatibility Study Update Report may be submitted to: Chris Sandfoss, Project Manager, Landrum & Brown, 4445 Lake Forest Drive, Suite 700, Cincinnati, OH 45242; or by email to: CMH-P150@landrumbrown.com. All comments must be received by August 13, 2021. If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact (513) 818-0617 by July 23, 2021.

6/24 Bexley News

6283268

Rocky Fork Enterprise
PROOF OF PUBLICATION

STATE OF OHIO, FRANKLIN COUNTY. SS:

Steve Vacolas
Credit Manager

Rocky Fork Enterprise, a newspaper published at Columbus, Franklin County, Ohio, with a weekly Circulation, personally appeared and made oath that the notice of which a true copy is hereunto attached was published in *Rocky Fork Enterprise* 1 Time(s) on June 24, 2021.

and that the rate charged therefore is the same as that charged for commercial advertising for like services.

Steve Vacolas

subscribed and Sworn on this 24th day of June, 2021 as witness my hand and seal of office.

NOTARY PUBLIC - STATE OF OHIO

NOTARIAL SEAL
STATE OF OHIO

VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023

Legal Notice
John Glenn Columbus International Airport
Draft Part 150 Noise Compatibility Study and Public Hearing

The Columbus Regional Airport Authority (CRAA) will hold a Public Meeting/Hearing regarding the Part 150 Noise Compatibility Study Update being conducted for the John Glenn Columbus International Airport. The Meeting/Hearing will be held from 5:30 p.m. to 7:00 p.m. on **July 29, 2021.** The Public Meeting /Hearing will be conducted virtually through online communication software. Pre-registration is required to participate in the Virtual Public Meeting/Hearing. Register in advance and submit comments at: www.airportprojects.net/cmh-part150/home/public-meetings/. Comments received at the Public Hearing will become part of the Final Part 150 Study Noise Compatibility Study Update Report to be submitted to the Federal Aviation Administration (FAA) for review. CRAA has published a Draft Part 150 Study Noise Compatibility Study Update Report. Copies of this report will be available for public review beginning June 22, 2021, at the following locations:
- Columbus Regional Airport Authority, John Glenn Columbus International Airport, Administrative Offices, 4600 International Gateway, Columbus, OH 43219. Please call (513) 818-0617 to set up an appointment.
- Columbus Metropolitan Library - Main Branch, 96 South Grant Avenue, Columbus, OH 43215, (614) 645-2275
- Columbus Metropolitan Library - Gahanna Branch, 310 Hamilton Road, Gahanna, OH 43230, (614) 645-2275 – Note temporary location opening on June 28th
- Columbus Metropolitan Library - Linden Branch, 2223 Cleveland Avenue, Columbus, OH 43211, (614) 645-2275
- Columbus Metropolitan Library – Martin Luther King Branch, 1467 East Long Street, Columbus, OH 43203, (614) 645-2275
- Columbus Metropolitan Library - Reynoldsburg Branch, 1402 Brice Road, Reynoldsburg, OH 43068, (614) 645-2275
- Columbus Metropolitan Library - Shepard Branch, 850 North Nelson Road, Columbus, OH 43219, (614) 645-2275
- Columbus Metropolitan Library - Whitehall Branch, 4445 East Broad Street, Columbus, OH 43213, (614) 645-2275
- Bexley Public Library, 2411 East Main Street, Columbus, OH 43209, (614) 231-2793
- Online: www.airportprojects.net/cmh-part150/home/documentsreports/

Comments on the Draft Part 150 Study Noise Compatibility Study Update Report may be submitted to: Chris Sandfoss, Project Manager, Landrum & Brown, 4445 Lake Forest Drive, Suite 700, Cincinnati, OH 45242; or by email to: CMH-P150@landrumbrown.com. All comments must be received by August 13, 2021. If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact (513) 818-0617 by July 23, 2021.

6/24 Rocky Fork Enterprise

Murphy Epson

Whitehall News
PROOF OF PUBLICATION

STATE OF OHIO, FRANKLIN COUNTY. SS:

Steve Vacolas
Credit Manager

Whitehall News, a newspaper published at Columbus, Franklin County, Ohio, with a weekly Circulation, personally appeared and made oath that the notice of which a true copy is hereunto attached was published in *Whitehall News* 1 Time(s) on June 24, 2021.

and that the rate charged therefore is the same as that charged for commercial advertising for like services.

Steve Vacolas

subscribed and Sworn on this 24th day of June, 2021 as witness my hand and seal of office.

Veronica Hill

NOTARY PUBLIC - STATE OF OHIO

NOTARIAL SEAL
STATE OF OHIO

VERONICA HILL
Notary Public, State of Ohio
My Commission Expires 12-04-2023

Legal Notice
John Glenn Columbus International Airport
Draft Part 150 Noise Compatibility Study and Public Hearing

The Columbus Regional Airport Authority (CRAA) will hold a Public Meeting/Hearing regarding the Part 150 Noise Compatibility Study Update being conducted for the John Glenn Columbus International Airport. The Meeting/Hearing will be held from 5:30 p.m. to 7:00 p.m. on **July 29, 2021**. The Public Meeting /Hearing will be conducted virtually through online communication software. Pre-registration is required to participate in the Virtual Public Meeting/Hearing. Register in advance and submit comments at: www.airportprojects.net/cmh-part150/home/public-meetings/. Comments received at the Public Hearing will become part of the Final Part 150 Study Noise Compatibility Study Update Report to be submitted to the Federal Aviation Administration (FAA) for review. CRAA has published a Draft Part 150 Study Noise Compatibility Study Update Report. Copies of this report will be available for public review beginning June 22, 2021, at the following locations:
- Columbus Regional Airport Authority, John Glenn Columbus International Airport, Administrative Offices, 4600 International Gateway, Columbus, OH 43219. Please call (513) 818-0617 to set up an appointment.
- Columbus Metropolitan Library - Main Branch, 96 South Grant Avenue, Columbus, OH 43215, (614) 645-2275
- Columbus Metropolitan Library - Gahanna Branch, 310 Hamilton Road, Gahanna, OH 43230, (614) 645-2275 – Note temporary location opening on June 28th
- Columbus Metropolitan Library - Linden Branch, 2223 Cleveland Avenue, Columbus, OH 43211, (614) 645-2275
- Columbus Metropolitan Library – Martin Luther King Branch, 1467 East Long Street, Columbus, OH 43203, (614) 645-2275
- Columbus Metropolitan Library - Reynoldsburg Branch, 1402 Brice Road, Reynoldsburg, OH 43068, (614) 645-2275
- Columbus Metropolitan Library - Shepard Branch, 850 North Nelson Road, Columbus, OH 43219, (614) 645-2275
- Columbus Metropolitan Library - Whitehall Branch, 4445 East Broad Street, Columbus, OH 43213, (614) 645-2275
- Bexley Public Library, 2411 East Main Street, Columbus, OH 43209, (614) 231-2793
- Online:
www.airportprojects.net/cmh-part150/home/documentsreports/
Comments on the Draft Part 150 Study Noise Compatibility Study Update Report may be submitted to: Chris Sandfoss, Project Manager, Landrum & Brown, 4445 Lake Forest Drive, Suite 700, Cincinnati, OH 45242; or by email to: CMH-P150@landrumbrown.com. All comments must be received by August 13, 2021. If special accommodations, such as audio or visual assistance, are required to participate in the online meeting, or if internet access is not available, please contact (513) 818-0617 by July 23, 2021.

6/24 Whitehall News

6283272

VIRTUAL
PUBLIC MEETING/HEARING

John Glenn Columbus International Airport
Part 150 Noise Compatibility Study

Thursday, July 29, 2021
5:30 to 7 PM

The public meeting/hearing will be conducted virtually through online communication software. The meeting will begin with a brief presentation followed by a public comment session.

Pre-registration required

Register, review documents, and send questions/comments in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings

The Draft Part 150 Noise Compatibility Study Update Report will be available at the following locations for public review beginning June 22, 2021:

Columbus Regional Airport Authority
John Glenn Columbus International Airport
Administrative Offices
4600 International Gateway
Columbus, OH 43219
Please call 513-818-0617 to set up an appointment

Columbus Metropolitan Library
Main Branch
96 South Grant Avenue
Columbus, OH 43215
614-645-2275

Columbus Metropolitan Library
Gahanna Branch
310 Hamilton Road
Gahanna, OH 43230
614-645-2275
Note temporary location opening on June 28

Columbus Metropolitan Library
Linden Branch
2223 Cleveland Avenue
Columbus, OH 43211
614-645-2275

Columbus Metropolitan Library
Reynoldsburg Branch
1402 Brice Road
Reynoldsburg, OH 43068
614-645-2275

Columbus Metropolitan Library
Shepard Branch
850 North Nelson Road
Columbus, OH 43219
614-645-2275

Columbus Metropolitan Library
Whitehall Branch
4445 East Broad Street
Columbus, OH 43213
614-645-2275

Bexley Public Library
2411 East Main Street
Columbus, OH 43209
614-231-2793

Online: *www.airportprojects.net/cmh-part150/home/documents-reports*

If special accommodations, such as audio or visual assistance, are required to review the Draft Part 150 Study Document or participate in the virtual public hearing, or if internet access is not available, please contact the Project Team at 513-818-0617 by July 23, 2021.

COLUMBUS REGIONAL AIRPORT AUTHORITY

JOHN GLENN INTERNATIONAL

Bexley Edition

Time spent as interim superintendent will be cherished

Dan Good
Distinctly Bexley Schools

Distinctly Bexley.

It's a phrase that stuck out to me when I joined the district in October 2020, and it rings more true today than it did months ago.

Throughout my brief but memorable chapter as interim superintendent, I have had the great privilege to see the many aspects of what distinguishes Bexley as a community and as a school district.

To the staff: You are truly distinct. Masterful, purposeful, devoted and beloved. The staff in each building, department and from every level make Bexley City Schools a unique place to work and learn. I'm grateful to have been welcomed into such a vibrant group of educators and to have seen you perform in a year like no other. Thank you.

To the students: You are truly distinct. According to the dictionary, the word distinct means "recognizably different in nature from something else of a similar type." I have witnessed your resilience, resolve and your ability to think critically and apply yourselves in a distinct time in history. You have grown, are recognizably different and are poised for greatness. Thank you.

To the families: You are truly distinct. One of the most significant indicators of student success is family engagement, it's critically important for students to be supported at home and at school as they grow and develop. Collectively, you have risen to the challenge to participate in education this year and continue to use your voices to advocate for the needs of all students. Thank you.

To the community: You are truly distinct. The African proverb, "it takes a village" is ingrained into the DNA of Bexley. Businesses, foundations, community organizations, city officials and neighbors consistently answered the call and came to the collaborative table to respond to unique challenges and design creative solutions from donations to services to partnerships. Thank you.

As I close my chapter with Bexley City Schools, I am confident of two things. I am leaving the district in the good hands of Jason Fine, the board of education and the staff, students, families and community members that will continue to honor the tradition of excellence.

Together, you will continue to embrace new opportunities for betterment and remain Distinctly Bexley.

Dan Good was the interim superintendent of Bexley City Schools. His last day was June 30. Learn more about the district at bexleyschools.org.

Rules

Continued from Page 1A

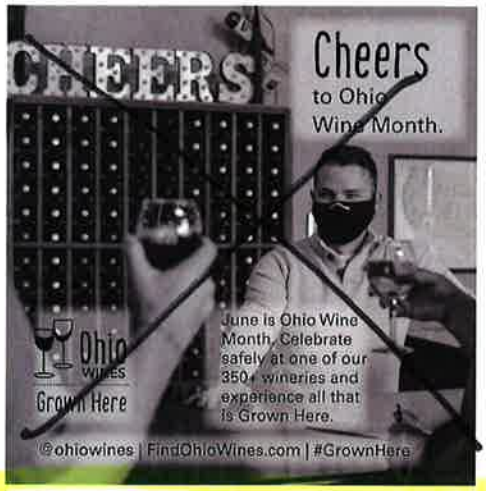
them on an ordinance," Fishel said.

In other business, council member Richard Sharp, who was elected in November 2009, announced that he will not seek reelection this year. His tenure includes two years as president from 2013 to 2015. He is the founder and owner of the Bexley BEAT Shuttle Service.

"After consideration of work and life balance, I made the decision not to run for reelection for council," he said. "Many of the goals I'd had for the city have been achieved, so I'm 'graduating' after 12 years from council."

Sharp is one of three council members whose terms will expire at the end of the year; the others are council President Lori Ann Feibel and member Monique Lampke, according to the Franklin County Board of Elections. Feibel and Lampke have not announced campaign plans.

editorial@thisweek-news.com
@ThisWeekNews



Economy

Continued from Page 6A

take a part-time job and then study to get back their credentials."

To address such challenges, Columbus City Council and the Franklin County commissioners are developing a plan to improve immigrant integration in the region through Gateways for Growth, a program that offers research support for cities nationwide.

The yearlong project, which was started earlier this year, will focus on identifying gaps and recommendations in such areas as education and workforce development for immigrants.

"We will continue to strive to be the most welcoming city in Ohio," City Council member Emmanuel Remy said. "The Gateways for Growth program is an important step in addressing economic, language and cultural gaps."

Yilun Cheng is a Report for America corps member and covers immigration issues for The Dispatch.
ycheng@dispatch.com
@ChengYilun

VIRTUAL
PUBLIC MEETING/HEARING
John Glenn Columbus International Airport
Part 150 Noise Compatibility Study

Thursday, July 29, 2021
5:30 to 7 PM

The public meeting/hearing will be conducted virtually through online communication software. The meeting will begin with a brief presentation followed by a public comment session.

Pre-registration required

Register, review documents, and send questions/comments in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings

The Draft Part 150 Noise Compatibility Study Update Report will be available at the following locations for public review beginning June 22, 2021:

Columbus Regional Airport Authority
John Glenn Columbus International Airport
Administrative Offices
4600 International Gateway
Columbus, OH 43219
Please call 513-818-0617 to set up an appointment

Columbus Metropolitan Library
Main Branch
96 South Grant Avenue
Columbus, OH 43215
614-645-2275

Columbus Metropolitan Library
Gahanna Branch
310 Hamilton Road
Gahanna, OH 43230
614-645-2275
Note temporary location opening on June 28

Columbus Metropolitan Library
Linden Branch
2223 Cleveland Avenue
Columbus, OH 43211
614-645-2275

Columbus Metropolitan Library
Reynoldsburg Branch
1402 Brice Road
Reynoldsburg, OH 43068
614-645-2275

Columbus Metropolitan Library
Shepard Branch
850 North Nelson Road
Columbus, OH 43219
614-645-2275

Columbus Metropolitan Library
Whitehall Branch
4445 East Broad Street
Columbus, OH 43213
614-645-2275

Bexley Public Library
2411 East Main Street
Columbus, OH 43209
614-231-2793

Online: *www.airportprojects.net/cmh-part150/home/documents-reports*

If special accommodations, such as audio or visual assistance, are required to review the Draft Part 150 Study Document or participate in the virtual public hearing, or if internet access is not available, please contact the Project Team at 513-818-0617 by July 23, 2021.

COLUMBUS
JOHN GLENN INTERNATIONAL

Reynoldsburg Edition

VIRTUAL PUBLIC MEETING/HEARING

John Glenn Columbus International Airport
Part 150 Noise Compatibility Study

Thursday, July 29, 2021
5:30 to 7 PM

The public meeting/hearing will be conducted virtually through online communication software. The meeting will begin with a brief presentation followed by a public comment session.

Pre-registration required

Register, review documents, and send questions/comments in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings

The Draft Part 150 Noise Compatibility Study Update Report will be available at the following locations for public review beginning June 22, 2021:

Columbus Regional Airport Authority
John Glenn Columbus International Airport
Administrative Offices
4600 International Gateway
Columbus, OH 43219
Please call 513-818-0617 to set up an appointment

Columbus Metropolitan Library
Reynoldsburg Branch
1402 Brice Road
Reynoldsburg, OH 43068
614-645-2275

Columbus Metropolitan Library
Main Branch
96 South Grant Avenue
Columbus, OH 43215
614-645-2275

Columbus Metropolitan Library
Shepard Branch
850 North Nelson Road
Columbus, OH 43219
614-645-2275

Columbus Metropolitan Library
Gahanna Branch
310 Hamilton Road
Gahanna, OH 43230
614-645-2275
Note temporary location opening on June 28

Columbus Metropolitan Library
Whitehall Branch
4445 East Broad Street
Columbus, OH 43213
614-645-2275

Columbus Metropolitan Library
Linden Branch
2223 Cleveland Avenue
Columbus, OH 43211
614-645-2275

Bexley Public Library
2411 East Main Street
Columbus, OH 43209
614-231-2793

Online: *www.airportprojects.net/cmh-part150/home/documents-reports*

If special accommodations, such as audio or visual assistance, are required to review the Draft Part 150 Study Document or participate in the virtual public hearing, or if internet access is not available, please contact the Project Team at 513-818-0617 by July 23, 2021.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

ALL THINGS BASEMENTY!

WE FIX THIS ...AND THIS ...AND THIS ...AND THIS!

- ✓ Waterproofing
- ✓ Finishing
- ✓ Foundation Repairs
- ✓ Humidity & Mold Control
- ✓ Nasty Crawl Spaces too

Larry Janesky's Mid-State Basement Systems
Since 1987

AND WE CAN FINISH IT FOR YOU!

$500 OFF
Any Full Perimeter Waterproofing System with Sump Pump

FREE ESTIMATES

614-585-8808
BasementyInColumbus.com

After 16 months of working side by side with us to connect our hungry neighbors with healthy food, the Ohio National Guard will be decommissioned on July 2nd.

Though, the work continues.

Fill these shoes with your time.

Sign up for a volunteer shift today at
http://vhub.at/MOFC

mid-ohio food collective

www.mofcollective.org 3960 Brookham Dr. Grove City, OH 43123 614.277.FOOD (3663)

A heartfelt thanks to these amazing soldiers who stepped up during these extraordinary times.

Rocky Fork Edition

VIRTUAL PUBLIC MEETING/HEARING

John Glenn Columbus International Airport
Part 150 Noise Compatibility Study

Thursday, July 29, 2021
5:30 to 7 PM

The public meeting/hearing will be conducted virtually through online communication software. The meeting will begin with a brief presentation followed by a public comment session.

Pre-registration required

Register, review documents, and send questions/comments in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings

The Draft Part 150 Noise Compatibility Study Update Report will be available at the following locations for public review beginning June 22, 2021:

Columbus Regional Airport Authority
John Glenn Columbus International Airport
Administrative Offices
4600 International Gateway
Columbus, OH 43219
Please call 513-818-0617 to set up an appointment

Columbus Metropolitan Library
Main Branch
96 South Grant Avenue
Columbus, OH 43215
614-645-2275

Columbus Metropolitan Library
Gahanna Branch
310 Hamilton Road
Gahanna, OH 43230
614-645-2275
Note temporary location opening on June 28

Columbus Metropolitan Library
Linden Branch
2223 Cleveland Avenue
Columbus, OH 43211
614-645-2275

Columbus Metropolitan Library
Reynoldsburg Branch
1402 Brice Road
Reynoldsburg, OH 43068
614-645-2275

Columbus Metropolitan Library
Shepard Branch
850 North Nelson Road
Columbus, OH 43219
614-645-2275

Columbus Metropolitan Library
Whitehall Branch
4445 East Broad Street
Columbus, OH 43213
614-645-2275

Bexley Public Library
2411 East Main Street
Columbus, OH 43209
614-231-2793

Online: *www.airportprojects.net/cmh-part150/home/documents-reports*

If special accommodations, such as audio or visual assistance, are required to review the Draft Part 150 Study Document or participate in the virtual public hearing, or if internet access is not available, please contact the Project Team at 513-818-0617 by July 23, 2021.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

Providing You with the Best Care

Licking Memorial Vascular Surgery

Licking Memorial Vascular Surgery,
1371 West Main Street in Newark
Pataskala Health Campus,
Suite 202,
(220) 564-1965.

www.LMHealth.org

Licking Memorial Health Professionals

After 16 months of working side by side with us to connect our hungry neighbors with healthy food, the Ohio National Guard will be decommissioned on July 2nd.

Though, the work continues.

Fill these shoes with your time.

Sign up for a volunteer shift today at
http://vhub.at/MOFC

mid-ohio food collective

www.mofcollective.org 3960 Brookham Dr. Grove City, OH 43123 614.277.FOOD (3663)

A heartfelt thanks to these amazing soldiers who stepped up during these extraordinary times.

Whitehall Edition

This image is from Whitehall's 2019 Fourth of July fireworks display. This year's fireworks will be from 8 to 10 p.m. July 2, and a parade will start at 10 a.m. July 3.
COURTESY OF WHITEHALL

Fireworks

Continued from Page 1A

Schools and Eastland-Fairfield Career and Technical Schools boards.

Grand marshals of the parade are 8-year-old Carter Kefauver and his mother, Robin Kefauver.

Carter, who will be a fourth-grader at Beechwood Elementary School, started a message of kindness, called Carter-Kindess, in January and hasn't stopped since, his mother said.

Police officers, firefighters, nurses, Amazon delivery personnel, mail carriers and school employees either receive gift cards, kind messages or Carter's "sprinkles," chocolate, granola or candy bars. "They are the ones who help us the most," Carter said.

On June 15, he and his mother handed out their best wishes to 400 people who work at the oncology unit at Nationwide Children's Hospital.

Robin Kefauver said donations all have come from the public, who may donate on Carter's Facebook page, facebook.com/groups/903330413747660.

They will hand out candy bars at the parade.

"We don't stop at just Whitehall," Robin Kefauver said. "This is a mission he wants to spread far and wide."

gseman@thisweeknews.com
@ThisWeekGary

VIRTUAL
PUBLIC MEETING/HEARING
John Glenn Columbus International Airport
Part 150 Noise Compatibility Study

Thursday, July 29, 2021
5:30 to 7 PM

The public meeting/hearing will be conducted virtually through online communication software. The meeting will begin with a brief presentation followed by a public comment session.

Pre-registration required

Register, review documents, and send questions/comments in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings

The Draft Part 150 Noise Compatibility Study Update Report will be available at the following locations for public review beginning June 22, 2021:

Columbus Regional Airport Authority
John Glenn Columbus International Airport
Administrative Offices
4600 International Gateway
Columbus, OH 43219
Please call 513-818-0617 to set up an appointment

Columbus Metropolitan Library
Main Branch
96 South Grant Avenue
Columbus, OH 43215
614-645-2275

Columbus Metropolitan Library
Gahanna Branch
310 Hamilton Road
Gahanna, OH 43230
614-645-2275
New temporary location opening on June 28

Columbus Metropolitan Library
Linden Branch
2223 Cleveland Avenue
Columbus, OH 43211
614-645-2275

Columbus Metropolitan Library
Reynoldsburg Branch
1402 Brice Road
Reynoldsburg, OH 43068
614-645-2275

Columbus Metropolitan Library
Shepard Branch
850 North Nelson Road
Columbus, OH 43219
614-645-2275

Columbus Metropolitan Library
Whitehall Branch
4445 East Broad Street
Columbus, OH 43213
614-645-2275

Bexley Public Library
2411 East Main Street
Columbus, OH 43209
614-231-2793

Online: *www.airportprojects.net/cmh-part150/home/documents-reports*

If special accommodations, such as audio or visual assistance, are required to review the Draft Part 150 Study Document or participate in the virtual public hearing, or if internet access is not available, please contact the Project Team at 513-818-0617 by July 23, 2021.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

HORARIOS
LUNES - DOMINGO
9am- 9pm

BBB ACCREDITED BUSINESS

QUINTERO TAX MULTISERVICE LLC

Le brindamos los siguientes servicios:

- Taxes de pequeñas compañías, contratistas y subcontratistas.
- Solicitud el numero ITIN aunado con su declaración de impuestos

Somos una Empresa dedicada a hacerte la vida mas fácil y evitarte problemas futuros.

Ahora ponemos a tu disposición importantes servicios. Todo en un mismo lugar para ofrecer un mejor servicio a nuestra comunidad.

Cambio de cheques
Notario Publico
Pago de facturas o Billes. agua, luz y gas.
Envíos de dinero
Tramites de títulos
Tramite de Placas
Traducciones

Quintero Tax Multiservice LLC.
4216 West Broad St. Columbus, OH. 43228
PH 614-276-8078
Fax 614-276-8077
Cell 614-607-9616
Te espera tu amiga ***Claudia Quintero***

¿Necesita ayuda para recuperar su vida golpeada por la pandemia?

LA MEGA BOLSA DE TRABAJO
le puede asistir

Escúchenos cada jueves, de 12-12:30 p.m., para obtener buenos trabajos disponibles en su área.

MEGA 103.1 fm
MEGA 97.1 fm
LA MEGA CLEVELAND
LA MEGANOTA

REUNIÓN/AUDIENCIA PÚBLICA VIRTUAL

Estudio de Compatibilidad de Ruido Parte 150 para el Aeropuerto Internacional John Glenn Columbus

Jueves 29 de julio de 2021 | de 5:30 pm a 7:00 pm

La reunión/audiencia pública se llevará a cabo de manera virtual a través de un software de comunicación en línea. La reunión comenzará con una breve presentación seguida de una sesión de comentarios públicos.

Se requiere pre-registro

Regístrese, revise documentos, y mande preguntas y comentarios con antelación a:

www.airportprojects.net/cmh-part150/home/public-meetings

El Borrador de la Actualización del Estudio de Compatibilidad de Ruido Parte 150 estará disponible en los siguientes lugares para revisión publica a partir del 22 de junio de 2021:

Columbus Regional Airport Authority
John Glenn Columbus International Airport
Administrative Offices
4600 International Gateway
Columbus, OH 43219
Llame 513-818-0617 para programar una cita

Columbus Metropolitan Library
Main Branch
96 South Grant Avenue
Columbus, OH 43215
614-645-2275

Columbus Metropolitan Library
Gahanna Branch
310 Hamilton Road
Gahanna, OH 43230
614-645-2275
Esta es una nueva ubicación que se abre el 28 de junio

Columbus Metropolitan Library
Linden Branch
2223 Cleveland Avenue
Columbus, OH 43211
614-645-2275

Columbus Metropolitan Library
Reynoldsburg Branch
1402 Brice Road
Reynoldsburg, OH 43068
614-645-2275

Columbus Metropolitan Library
Shepard Branch
850 North Nelson Road
Columbus, OH 43219
614-645-2275

Columbus Metropolitan Library
Whitehall Branch
4445 East Broad Street
Columbus, OH 43213
614-645-2275

Bexley Public Library
2411 East Main Street
Columbus, OH 43209
614-231-2793

En línea: *www.airportprojects.net/cmh-part150/home/documents-reports*

Si se requiere un alojamiento especial, como asistencia visual o audiovisual, para revisar el Borrador de la Actualización del Estudio de Compatibilidad de Ruido Parte 150, para participar en la reunión/audiencia pública, o si no tiene acceso a Internet, por favor comuníquese con el equipo del proyecto al 513-818-0617 antes del 23 de julio de 2021.

COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

Seven Partners Selected to Boost Minority-Owned Businesses in Ohio

Minority-owned and socially and economically disadvantaged businesses throughout Ohio can help their businesses grow through professional advice and services from a network of assistance centers across the state.

The Ohio Development Services Agency has selected seven partners to operate Minority Business Assistance Centers (MBAC) to serve minority and disadvantaged businesses in every county in Ohio. Each center is staffed with trained business advisors who can provide no-cost counseling to polish business practices and help businesses grow and create jobs.

"Ohio Minority Business Assistance Centers have experienced unprecedented demand for their services over the past 15 months, and these seven partners will continue to help small businesses succeed in this difficult environment," Development Director Lydia Mihalik said. "These businesses are critical to Ohio's economic success, and our MBAC advisors are there to help them thrive."

The MBAC program is managed by Development's Minority Business Development Division.

"Our MBACs play a vital role in assisting our minority business owners with business development by helping them start, grow, and sustain their businesses," said Jeffrey L. Johnson, Chief of the Minority Business Development Division. "We are excited to partner with these host organizations to continue this great work."

The centers support minority-owned and disadvantaged businesses by offering no-cost counseling, state certification support, and trainings focused on creating jobs and increasing sales. Trained advisors at the centers also provide clients with access to capital and assistance with procuring government contracts.

Partners of the MBAC program consist of nonprofit organizations, economic development organizations, and educational institutions with strong experience in business and economic development.

Awarded Recipients:

Akron: Akron Urban League, akronurbanleague.org

Cincinnati: African American Chamber of Commerce Greater Cincinnati/Northern Kentucky,african-americanchamber.com

Cleveland: Urban League of Greater Cleveland, ulcleveland.org

Columbus: Columbus Urban League, cul.org

Dayton: City of Dayton, Human Relations Council, daytonhrc.org

Toledo: The Institute for Social Justice at Union Institute & University and Mays & Associates,myunion.edu/social-justice and maysassociatesltd.com

Youngstown: Youngstown Business Incubator, ybi.org

The awards followed a request-for-proposals process. Contracts with the partners will be for two years, from July 1, 2021, to June 30, 2023.

For more information about the Minority Business Assistance Centers, visit minority.ohio.govand click on Minority Business Assistance Centers.

City Announces American Rescue Plan Funding

$19.7 million focused on summer youth engagement and anti-violence efforts

The City of Columbus has received $93 million in federal funds out of an expected $187 million from the American Rescue Plan (ARP) to provide assistance in response to the COVID-19 pandemic. The funds will be delivered over two years and must be used by 2024. Columbus Mayor Andrew J. Ginther and City Council have agreed to allocate $19.7 million for short-term summer youth engagement and anti-violence efforts.

"Our city and our residents continue to suffer from the fallout of the global pandemic, and no one has been more negatively impacted than our young people," said Mayor Ginther. "Our first investment of American Rescue Plan dollars will help our kids regain some of what they lost with opportunities for programming, education and employment through city departments as well as through community partners."

"We are advancing a bold plan with the Mayor to put nearly $20 million into area nonprofits focused on keeping our kids safe while helping them catch up," said City Council President Shannon G. Hardin. "This package of ARP projects are critical to getting Columbus past the brutal challenges brought onto neighborhoods by COVID-19 restrictions and frustrations. Together with local partners we're helping make sure folks can get back to work, back into classes and back to living their lives safely."

Of the $19.7 million that is being allocated, $15.6 million will utilize ARP funding. The Columbus Recreation and Parks Department's (CRPD) total additional spending for summer programming is $4.8 million, with $4 million coming from City sources outside of the ARP allocation. $4.2 million will be used by CRPD to support qualified 501(c)(3) nonprofit organizations that provide youth programming centered on addressing educational disparities and/or promoting healthy childhood environments.

Requests for RFPs through CRPD have been posted on the city's Vendor Services portal since June 11, 2021. Proposals are due at noon on July 9, 2021. Questions can be submitted via email to:RecoveryFunding2021@columbus.gov.

The city is developing a process to determine how to best invest ARP funding to meet the community's near- and long-term needs, informed in part by the work of the joint City-County Recovery and Resiliency Committee. Community organizations seeking financial support for proposals utilizing American Recovery Plan funding are encouraged to submit proposals online utilizing a standard form that includes a budget and description of how the funds will be used.

VIRTUAL PUBLIC MEETING/HEARING

John Glenn Columbus International Airport
Part 150 Noise Compatibility Study

Thursday, July 29, 2021 | 5:30 to 7 PM

The public meeting/hearing will be conducted virtually through online communication software and begin with a brief presentation followed by a public comment session.

Pre-registration required

Register, review documents, and send questions/comments in advance at:

www.airportprojects.net/cmh-part150/home/public-meetings

The Draft Part 150 Noise Compatibility Study Update Report will be available at the following locations for public review beginning June 22, 2021:

Columbus Regional Airport Authority
John Glenn Columbus International Airport
Administrative Offices
4600 International Gateway
Columbus, OH 43219
Please call 513-818-0617 to set up an appointment

Columbus Metropolitan Library
Main Branch
96 South Grant Avenue
Columbus, OH 43215
614-645-2275

Columbus Metropolitan Library
Gahanna Branch
310 Hamilton Road
Gahanna, OH 43230
614-645-2275
Note temporary location opening on June 28

Columbus Metropolitan Library
Linden Branch
2223 Cleveland Avenue
Columbus, OH 43211
614-645-2275

Columbus Metropolitan Library
Reynoldsburg Branch
1402 Brice Road
Reynoldsburg, OH 43068
614-645-2275

Columbus Metropolitan Library
Shepard Branch
850 North Nelson Road
Columbus, OH 43219
614-645-2275

Columbus Metropolitan Library
Whitehall Branch
4445 East Broad Street
Columbus, OH 43213
614-645-2275

Bexley Public Library
2411 East Main Street
Columbus, OH 43209
614-231-2793

Online: *www.airportprojects.net/cmh-part150/home/documents-reports*

If special accommodations, such as audio or visual assistance, are required to review the Draft Part 150 Study Document or participate in the virtual public hearing, or if internet access is not available, please contact the Project Team at 513-818-0617 by July 23, 2021.

COLUMBUS REGIONAL AIRPORT AUTHORITY

JOHN GLENN INTERNATIONAL

This page intentionally left blank

Part 150 Noise Compatibility Study

Public Information Meeting and Public Hearing
July 29, 2021

JOHN GLENN INTERNATIONAL

1

Introductions

- **Justin Anderson, A.A.E.**
  Senior Airport Planner
  Columbus Regional Airport Authority
- **Chris Sandfoss, AICP**
  Part 150 Study Project Manager
  Landrum & Brown
- **Marie Keister, AICP**
  Part 150 Study Stakeholder & Public Involvement Lead
  MurphyEpson

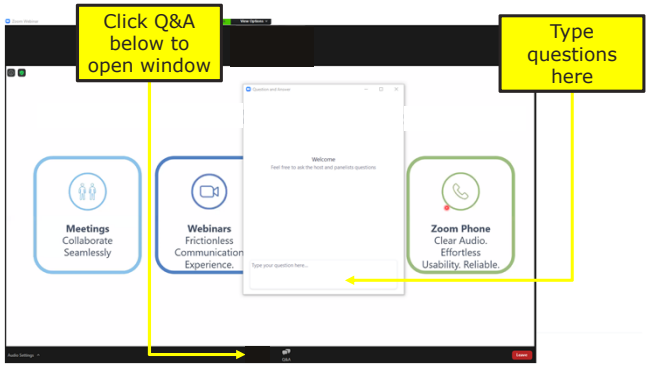
2

Agenda

- Welcome and discussion of virtual meeting resources
- What's happening at CMH
- Part 150 Noise Compatibility Study process
- Noise Compatibility Planning at CMH
- Existing and Future Baseline Noise Exposure Contours
- Recommended Noise Compatibility Program (NCP) measures
- Next steps

3

Meeting Logistics



4

What's happening at CMH?

Traffic rebound led by leisure travelers

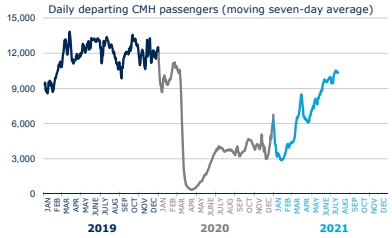
New service added

Breeze
Charleston, Hartford, New Orleans, Norfolk, Tampa

Southwest
Miami & Panama City Beach (weekly)
Myrtle Beach & Sarasota

spirit
Los Angeles, Pensacola

UNITED
Charleston, Hilton Head Island, Portland (Maine) summer only service



Recently announced service return to critical markets lost during COVID-19

- Boston: Delta service returned | American launching mid-August
- Toronto: Air Canada service returned

JOHN GLENN INTERNATIONAL 5

5

"Driving Economic Growth, Connecting Ohio With the World"

Ongoing Development at CMH

Consolidated Rental Car Facility

- Open to public in 3rd Quarter, 2021
- 2,500 Storage Spaces
- $140M Capital Investment ($95M in construction resulting in 1,600 jobs)

Residence Inn Hotel

- 122 Guest Suites on 4 Floors
- Meeting Space for up to 35 Guests

JOHN GLENN INTERNATIONAL 6

6

Part 150 Noise Compatibility Study Process

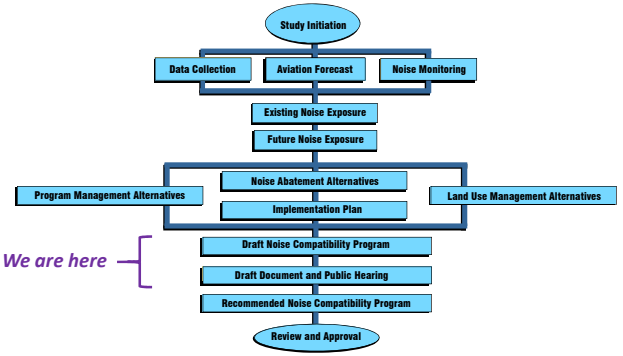
Essential Elements of a Part 150 Study

- Noise Exposure Maps (NEMs):
  - Description of the noise levels for existing and future (+5 years) conditions
- Noise Compatibility Program (NCP):
  - Recommendations for reducing, minimizing, and/or mitigating aircraft noise and land use conflicts
    - Noise Abatement
    - Land Use Mitigation
    - Program Management Measures
- Public Involvement

JOHN GLENN INTERNATIONAL 7

7

Part 150 Noise Compatibility Study Process



JOHN GLENN INTERNATIONAL 8

8

History of Noise Compatibility Planning

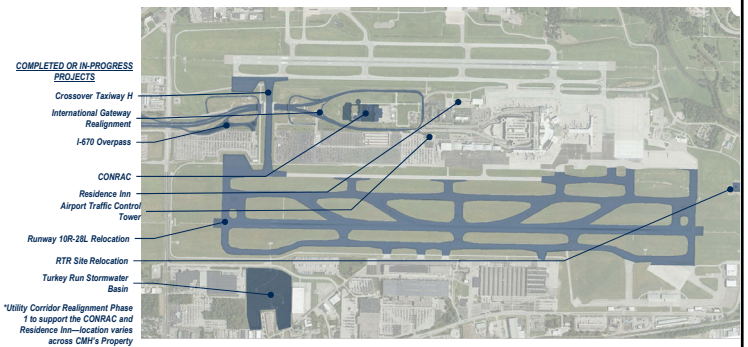
Previous Part 150 Studies Completed at CMH

- 1987 Part 150 Study (original)
- 1993 Part 150 Study Update
- 1999 Part 150 Study Update
- 2001 Noise Exposure Map Update
- 2007 Part 150 Study Update (FAA Record of Approval in 2008)
  - Conducted concurrently with the Environmental Impact Statement (EIS) for relocation of the south runway

JOHN GLENN INTERNATIONAL 9

9

Master Plan in Action



JOHN GLENN INTERNATIONAL 10

10

History of Noise Compatibility Planning

Mitigation Program Measures

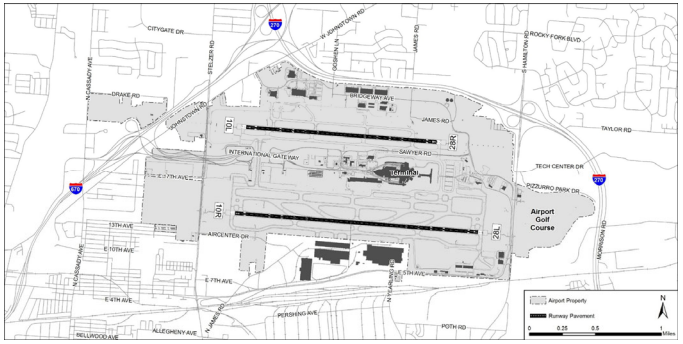
- Residential Sound Insulation
  - CRAA has provided sound insulation to nearly 800 homes
- Acquisition Program
  - Acquisition of 35 homes impacted by relocation of the south runway
  - Provided relocation assistance to affected residents
- Tracking and Measuring Noise
  - Operates WebTrak System with 16 permanent noise monitors
  - Allows staff and the general public the ability to track flight activity and noise levels
- Noise Complaint & Inquiries
  - Dedicated staff to respond to complaints and inquiries about aircraft operations and noise
- Proactive planning
  - Adhere to both federal and local regulations
  - Maintain transparent communication
  - Provide information to land use planners, developers, and the general public

JOHN GLENN INTERNATIONAL 11

11

CMH Airport Layout

Runway Layout

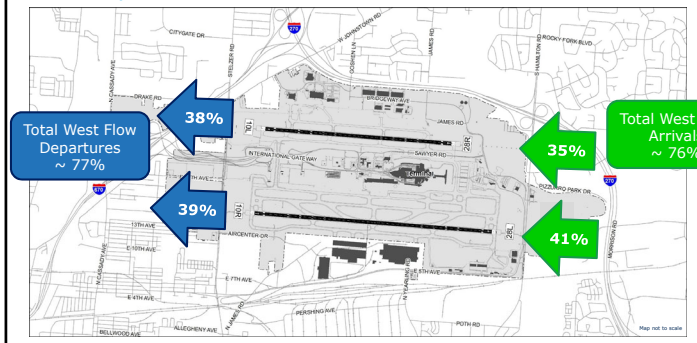


JOHN GLENN INTERNATIONAL 12

12

CMH Airport Operational Flow

Runway Use – West Flow



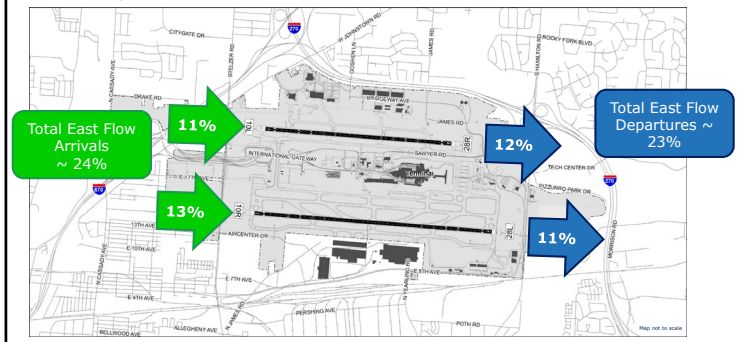
JOHN GLENN INTERNATIONAL

13

13

CMH Airport Operational Flow

Runway Use – East Flow

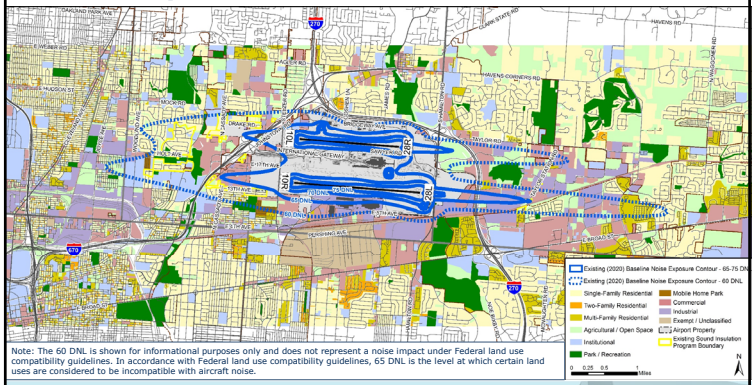


JOHN GLENN INTERNATIONAL

14

14

Existing (2020) Baseline Noise Exposure Contour



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

15

15

Existing (2020) Baseline Noise Exposure Contour

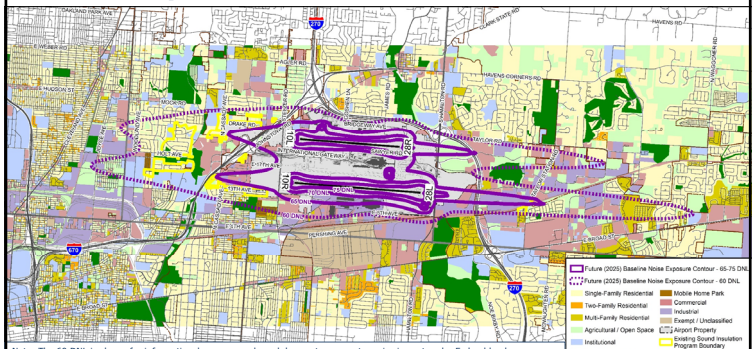
Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Population			
Columbus	0	0	0
Gahanna	0	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	0	0	0
Noise-Sensitive Facilities			
Schools / Daycares	1	0	0

JOHN GLENN INTERNATIONAL

16

16

Future (2025) Baseline Noise Exposure Contour



Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

17

17

Future (2025) Baseline Noise Exposure Contour

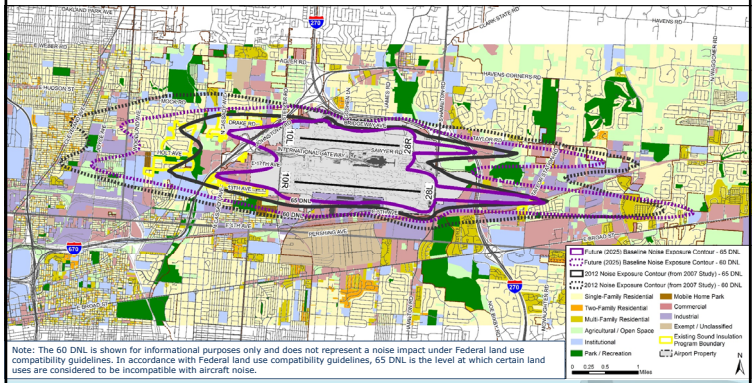
Jurisdiction	65-70 DNL	70-75 DNL	75+ DNL
Housing Counts			
Columbus	1	0	0
Gahanna	1	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	**2**	**0**	**0**
Population			
Columbus	3	0	0
Gahanna	3	0	0
Mifflin Township	0	0	0
Jefferson Township	0	0	0
Total	**6**	**0**	**0**
Noise-Sensitive Facilities			
Schools / Daycares	1	0	0

JOHN GLENN INTERNATIONAL

19

19

Future (2025) Baseline Noise Exposure Contour Compared to Future (2012) NCP Contour from 2007 Study



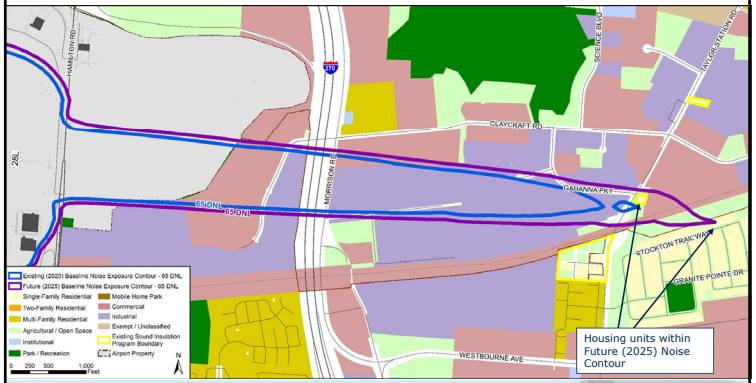
Note: The 60 DNL is shown for informational purposes only and does not represent a noise impact under Federal land use compatibility guidelines. In accordance with Federal land use compatibility guidelines, 65 DNL is the level at which certain land uses are considered to be incompatible with aircraft noise.

JOHN GLENN INTERNATIONAL

18

18

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours

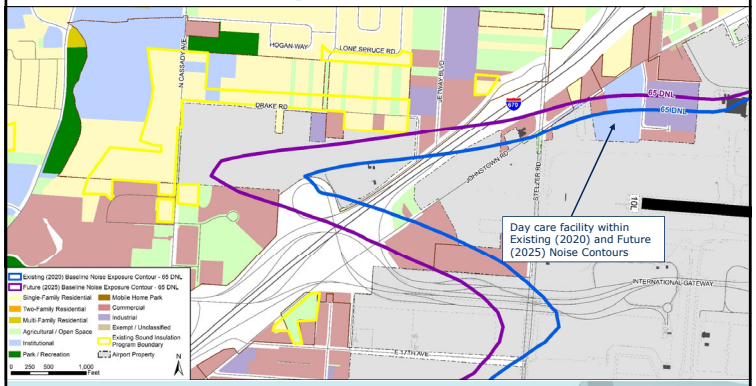


JOHN GLENN INTERNATIONAL

20

20

Existing (2020) compared to Future (2025) Baseline Noise Exposure Contours



JOHN GLENN INTERNATIONAL

21

21

Noise Compatibility Program

Types of Program Measures

- Noise Abatement Measures
- Land Use Measures
  - Corrective (Remedial) Land Use Measures
  - Preventative Land Use Measures
- Program Management (Implementation) Measures

JOHN GLENN INTERNATIONAL

22

22

Noise Compatibility Program Measures

Noise Abatement Measures

- **NA-1:** Amend the John Glenn Columbus International Airport nighttime maintenance Run-up Policy to designate an additional run-up location north of the airfield for the relocation of the NetJets (EJA) 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 NetJets facility.

  Recommendation: Continue measure

- **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 along I-270.

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

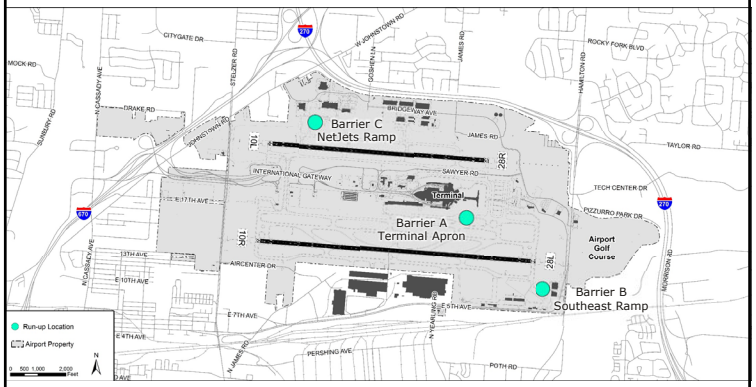
  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL

23

23

Existing Run-up Barrier Locations



JOHN GLENN INTERNATIONAL

24

24

Noise Compatibility Program Measures

Noise Abatement Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 25

25

Noise Compatibility Program Measures

Noise Abatement Measures

- **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.

  Recommendation: Continue measure

- **NA-5:** Measure previously withdrawn

JOHN GLENN INTERNATIONAL 26

26

Noise Compatibility Program Measures

Noise Abatement Measures

- **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.

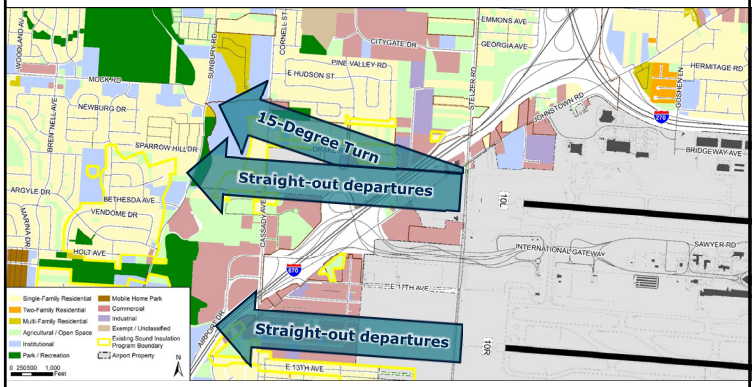
  Status: Implemented – This measure is used when traffic conditions warrant.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 27

27

15-Degree Departure Turn



JOHN GLENN INTERNATIONAL 28

28

Noise Compatibility Program Measures

Noise Abatement Measures

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

  Status: Currently being implemented – RNAV/RNP procedures are being developed independently by the FAA and are expected to be implemented in September 2021.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL

29

29

Noise Compatibility Program Measures

Noise Abatement Measures

- **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.

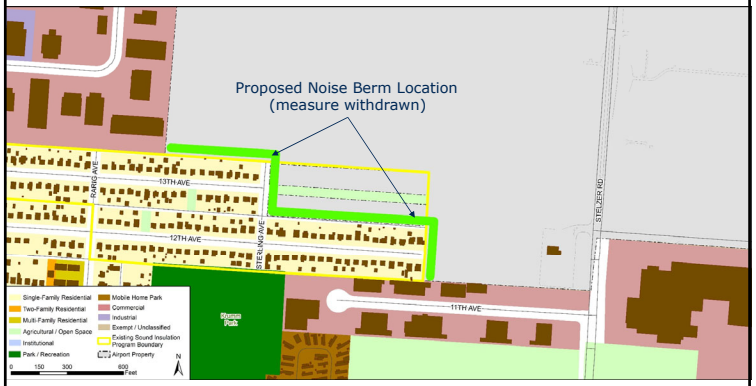
  Recommendation: Withdraw measure

JOHN GLENN INTERNATIONAL

30

30

Previously Proposed Noise Berm Location



JOHN GLENN INTERNATIONAL

31

31

Noise Compatibility Program Measures

Noise Abatement Measures

- **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.

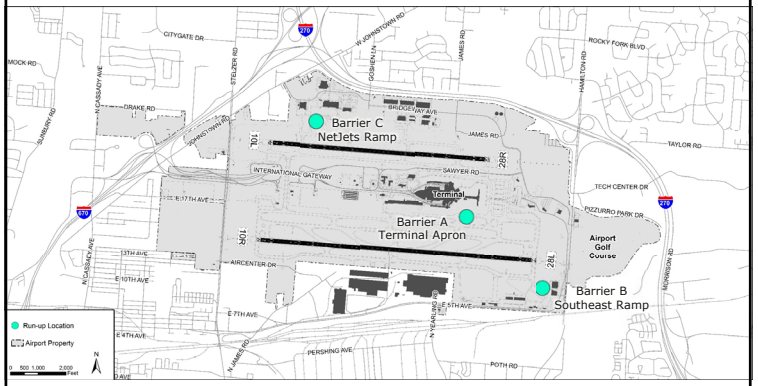
  Recommendation: Continue Measure (if needed)

JOHN GLENN INTERNATIONAL

32

32

Existing Run-up Barrier Locations



JOHN GLENN INTERNATIONAL 33

33

Noise Compatibility Program Measures

Land Use 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.

  Recommendation: Continue measure with modification to update program boundary based upon Future (2025) NCP noise exposure contour from this Part 150 Study.

  Based on the preliminary results of the noise contour modeling, there would be no new residences located within the 65+ DNL program boundary; therefore, no new noise insulation would be offered.

JOHN GLENN INTERNATIONAL 34

34

Noise Compatibility Program Measures

Land Use Measures

- **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.

  Recommendation: Continue measure with modification to update program boundary based upon Future NCP from this Part 150 Study.

  Based on the preliminary results of the noise contour modeling, there would be no churches located within the 65+ DNL program boundary; therefore, no new noise insulation would be offered.

JOHN GLENN INTERNATIONAL 35

35

Noise Compatibility Program Measures

Land Use Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 36

36

Noise Compatibility Program Measures

Land Use Measures

- **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.

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

  Recommendation: Continue measure based on previously-approved boundary. Use of the fixed boundary that follows existing physical features provides for consistency for land use planning and avoids changing boundaries in the future.

JOHN GLENN INTERNATIONAL 37

37

Noise Compatibility Program Measures

Land Use Measures

- **LU-5:** Seek cooperation from Franklin County to amend the Franklin County Zoning Resolution, Section 660.07, Avigation Easement, to require applicant 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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 38

38

Noise Compatibility Program Measures

Land Use Measures

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 39

39

Noise Compatibility Program Measures

Land Use Measures

- **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: Not implemented – Coordination with local jurisdictions has occurred; however, subdivision regulations have not been updated.

  Recommendation: Continue measure

- **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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 40

40

Noise Compatibility Program Measures

Land Use Measures

- **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).

  Status: 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.

  Recommendation: Continue measure

- **LU-10:** Periodically place advertisements in a variety of media outlets delineating the boundaries of the proposed Airport Land Use Management District (ALUMD).

  Status: Not implemented – The ALUMD has not been adopted. The CRAA makes the noise exposure maps and other noise compatibility information available on its website.

  Recommendation: Continue measure

- **LU-11:** Measure previously withdrawn

JOHN GLENN INTERNATIONAL

Noise Compatibility Program Measures

Land Use Measures

- **LU-12:** Develop an Airport Land Use Management District (ALUMD) based on the 2023 Noise Exposure Map/Noise Compatibility Program (NCP) noise contour, and other 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.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL

Noise Compatibility Program Measures

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.

  Recommendation: Continue measure

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

  Status: Ongoing – The CRAA continues to operate the Noise Management Office to support the efforts to minimize the noise impact of CMH.

  Recommendation: Continue measure

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

  Status: Ongoing – The CRAA maintains public involvement activities, including the 24-hour noise hotline, WebTrak tracking system, and noise monitoring system.

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL

Noise Compatibility Program Measures

Program Management Measures

- **PM-4:** Maintain the noise and flight track monitoring system and expand and upgrade the system as necessary. Add four 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.

  Recommendation: Continue measure with modification to remove the recommendation to install additional NMTs since that recommendation is complete.

JOHN GLENN INTERNATIONAL

Noise Compatibility Program Measures

Program Management Measures

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

  Status: Ongoing.

  Recommendation: Continue measure

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

  Status: Implemented (*Not active at this time*)

  Recommendation: Continue measure

JOHN GLENN INTERNATIONAL 45

45

Next Steps

- **Late Summer 2021**
  - Review and address public comments
- **Fall 2021**
  - Prepare Final Part 150 Noise Compatibility Program (NCP) Update Report
  - Submit Final NCP Update to FAA for review/approval
  - Update project website with frequently asked questions from Public Hearing
- **Spring/Summer 2022**
  - Anticipate FAA Record of Approval
  - Final NCP will be posted on the project website

JOHN GLENN INTERNATIONAL 46

46

How to submit questions or comments?

- Using the Q&A function during the meeting until 7pm
- Online: www.airportprojects.net/cmh-part150/contact
- Mail:

  Landrum & Brown
  Attn: Chris Sandfoss
  4445 Lake Forest Drive, Suite 700
  Cincinnati, OH 45242

- Please submit comments by **August 13, 2021**

JOHN GLENN INTERNATIONAL 47

47

Public Hearing

- We are accepting comments on the Draft Noise Compatibility Program Update on the record through **August 13th**.
- Those wishing to speak can use the "Raise Hand" button at the bottom of your screen; or if dialed in by phone by press ***9** on your keypad.
- A copy of the transcript will be included in the Final Part 150 document.
- People will be allotted up to 3 minutes to speak.
- Those that wish to speak longer may request to speak again.
- Offensive language will not be tolerated and will be cause for removal from the meeting.
- Comments may also be submitted online at www.airportprojects.net/cmh-part150/contact
  Or via U.S. Mail to:

  Landrum & Brown
  Attn: Chris Sandfoss
  4445 Lake Forest Drive, Suite 700
  Cincinnati, OH 45242

JOHN GLENN INTERNATIONAL 48

48

PUBLIC INFORMATIONAL MEETING AND PUBLIC HEARING

- - -

IN RE: John Glenn Columbus International Airport Part 150 Noise Compatibility Study

- - -

July 29, 2021

Remote Proceeding

taken before me, Angela S. Moore, a Professional Reporter and Notary Public in and for the State of Ohio, taken on Thursday, July 29, 2021, commencing at approximately 5:30 p.m., and concluding at approximately 7:00 p.m.

- - -

HIGGINS & ASSOCIATES
4889 Sinclair Road, Suite 102
Columbus, OH 43229-5433
614.985.DEPO(3376) 888.244.1211

APPEARANCES:

On behalf of Landrum & Brown:
Chris Sandfoss

On behalf of Murphy Epson:
Marie Keister
Nick Hoffman

Project Manager:
Justin Anderson

- - -

P R O C E E D I N G S

- - -

MS. KEISTER: Good evening everyone. I'm Marie Keister, and I'm part of the project team that is welcoming you tonight to the Part 150 Noise Compatibility Study for John Glenn International Airport. We are very delighted to have you here this evening. It is 5:30 on the dot; so I would like to turn it over to our Columbus Regional Airport Authority project manager, and he will say a few words of welcome, and then I will come back.

MR. ANDERSON: Good evening everyone. And welcome to the public hearing for the Part 150 Noise Compatibility Study at John Glenn Columbus International Airport. My name is Justin Anderson, and I'm the project manager for this Part 150 study and also act as the senior airport planner for the Columbus Regional Airport Authority.

Just to go ahead and give you guys a quick overview of who we are, the Columbus Regional Airport Authority oversees three airports in the Columbus region. We have John Glenn Columbus International Airport, which is primarily our passenger airport, we have Rickenbacker

International Airport, which is in the southeast side of the city, that is primarily our cargo airport, with Allegiant operating out of there, and then Bolton Field, which is in the southwest part of the city as well, which serves our general aviation community. This study tonight focuses solely on John Glenn Columbus International Airport.

And before we jump into the agenda, I want to introduce our team. We have Chris Sandfoss from Landrum & Brown, who is a global airport planning firm based in Cincinnati. Chris is the project manager on the consulting side, who specializes in environmental studies as well as noise studies, such as this one. Then we also have Marie Keister, who is our community engagement consultant from Murphy Epson. And then we also have Mark Kelby as well, who's another airport planner here at the Columbus Regional Airport Authority.

On behalf of the Airport Authority we thank you for joining us tonight as we continue to sustain a strong relationship with the community that we serve.

I will give it back to Marie here

real quick to go over the agenda and media logistics.

MS. KEISTER: Thanks so much, Justin.

So this is kind of an unusual evening. It's not your typical public meeting, it's really what we call a public information meeting combined with a public hearing. So we are going to go through this agenda, and you will hear from Chris in just a minute and he will give an overview of the Part 150 Noise Compatibility Study process, the planning process at John Glenn International Airport. He's going to talk about existing and future baseline noise exposure contours, and then he will walk through recommended noise compatibility program measures. Then we will get to the next steps, and then at that point, I will give you some instructions and we will open a public hearing. So unlike a public meeting where it's more of a dialogue, you ask a bunch of questions, we offer a lot of answers, in this case you will have a timed opportunity to provide testimony. So more on how to explain that, but as we go through the meeting tonight, if you do have clarifying questions -- if we can go to the next

slide. Thank you, Chris -- you will be able to click on that Q&A window and you can type your question in there. I just want you to be aware that that will not be a formal record of any comments tonight. So you can type your questions in there for clarifying, and we do have a resource available to answer those clarifying questions, and then that answer would go where everybody can see it. But otherwise, you will have a chance to weigh in and let us know your thoughts at the public hearing portion of the meeting.

So with that, I will turn it over to our consultant project manager, Chris Sandfoss.

MR. SANDFOSS: Thank you, Marie.

So for those of you who are not as familiar with a Part 150 study and what it entails, there's three main elements of a Part 150 study. Part 150 being the section in the code of federal regulations that the type of study is listed under; so that's why it's called Part 150. But there's three main elements of a Part 150 study:

There's the generation of noise exposure maps, which show noise exposure contours over top of a land use map that show existing noise conditions and noise conditions five years into the

future.

Then there's the Noise Compatibility Program or the NCP, which includes recommended measures to reduce or minimize or otherwise mitigate noise impacts on noise-sensitive land uses. And those can be either noise abatement measures, land use mitigation measures, and program management measures. And we will discuss more about the particular measures that are recommended as part of this study later on in the presentation.

And then there is a public involvement, which this is part of where the plan, the studies, the findings, the analysis, and recommendations are submitted for public review and comments. And so we are here tonight to present the findings of the study and the recommendations and gather public comment. The document is also available online and in local libraries for those that want to review it and provide any comments. And we will discuss at the end of the presentation on how to make comments, including making verbal comments here tonight, or submitting comments through e-mail or mail to us.

In general, the Part 150 study follows a multi-step process that is set up by

federal guidelines. And this is the process that we are required to follow when preparing such a study. We begin with a study initiation and data collection period, and then we prepare the existing year noise exposure contour and the future noise exposure contour representing existing conditions and conditions forecast for five years into the future.

Then after the noise contour analysis is conducted, we identify measures to reduce noise, noise impacts as best as possible, and then produce a draft version of that plan for public comment. So that's where we are at in the process right now, we have produced the draft plan with the draft recommended measures and are accepting public comments on the draft noise compatibility program.

After that process is complete, we will prepare a final document that will be submitted to the Federal Aviation Administration for review and approval.

I will turn things back over to Justin just to briefly discuss the history of noise compatibility planning at John Glenn Columbus International Airport.

MR. ANDERSON: Thanks, Chris.

So the Part 150 process is nothing new to the Columbus area. The Columbus Regional Airport Authority has always taken a proactive approach in monitoring noise generated from their airports and using that data to effectively work with local entities and the communities on noise mitigation efforts. We have conducted these types of studies for John Glenn specifically in 1987, 1993, 1999, 2001, and 2007. Additionally, we conducted an environmental impact study for the relocation of our south runway, Runway 10R/28L in 2008. And as part of the Federal Aviation Administration records of the decision in 2009 on that study, the CRAA, the Columbus Regional Airport Authority was mandated to complete another Part 150 after that project was done.

Instead of starting right after that project, we also had another project on the north side of our airfield, Runway 10L/28R to rehabilitate that pavement. So the FAA allowed us to wait until both runways are in their ultimate location and completely rehabbed and pavement in great condition before we did this study. The reason for that is that way the operations would

normalize and the split of operations on both runways would be accurate for readings to measure the noise levels.

Next slide, Chris. Thank you.

So over the years, the Airport Authority has implemented multiple residential sound inflation programs as a result of some of these studies. We have insulated nearly 800 homes. We have partaken property acquisitions and relocation assistance due to the south runway relocation and for other infrastructure improvements around the airfield. And we have also implemented a public live track system, which includes some monitoring of 16 permanent noise monitors that we have around the area. This allows the staff and general public the ability to track activity and noise levels near their home or a certain area. That website can also be found on the Airport Authority's website.

We also have a designated noise complaint hotline that is handled by internal staff. 164 complaints so far, which is fairly low compared to other airports in the country. Additionally, we work with local planners and developers to ensure surrounding land uses are

compatible and accepted of noise generated by the airport.

So before Chris talks about the specifics of noise exposure at the airport and our proposed mitigation efforts, I want to give a quick overview of our airfield layout and why it is laid out the way it is.

John Glenn Columbus International Airport has two parallel runways that are approximately 3,500 feet apart from each other. Runway 10L/28R, which is the runway on the north side of the airfield, and runway 10R/28L, which is on the south side. Runways are named this way to reflect the orientation in which they face in comparison to a compass. So if true north is 360 degrees, a runway called Runway 36 is oriented directly to the north. If true east is 90 degrees, a runway called Runway 9 is oriented 90 degrees to the east. FCMAs at John Glenn Columbus International, all runways are in the ten and two eight configuration, meaning they are oriented in an east and west direction. Runways are oriented this way to align with the direction the wind most often comes from.

So why does that matter? Aircraft

performs significantly better and in a safer manner when taking off and landing into the wind.

Next slide, Chris.

At CMH, we primarily operate into what we call western-operational flow. This is because the wind direction primarily comes out of the west. So when we are in a west flow, which is shown here, about 77% of the time we are landing and taking off on Runway 28L and 28R. Arrivals come from the east over the Gahanna area and take off to the west over the northeast neighbors.

Next slide, Chris.

The rest of the time we are landing and taking off on Runway 10L and Runway 10R, or in other words, landing from the west over the city, and taking off to the east over Gahanna and Blacklick. Operational flow into and out of airports across the country are dictated by the FAA air traffic control, not the airports. Our operational flow and percentages of how often we are in this flow are significant variables on how our noise contours are generated, which Chris will go over now and review.

MR. SANDFOSS: Thank you, Justin.

So as part of this study, we gather

a lot of operational data about how aircraft operate at the airports and the types of aircraft that operate at the airports, the runway used over an average annual yearly condition, flight tracks to and from the airport, and several other operational bits of data that are input into the Federal Aviation Administration's computer model that is used to generate a set of noise exposure contours, which are depicted using lines on a map that show areas of equal noise exposure.

For this study, we use the FAA's requirement to depict noise levels using the day-night average sound level, or DNL metric. You will probably hear the word DNL quite a lot during this presentation. And 65 DNL is considered by the federal government to be the threshold at which significant impacts would occur to noise sensitive land uses. So this slide here shows the existing baseline noise exposure contour that depicts 2020, year 2020 conditions at CMH using the solid and dotted blue lines on the map over top of a land use base map, the other colors of the map represent different land use types. Light yellow represents single-family residential, dark yellow and orange represent higher density residential, red

represents commercial, purple represents industrial, and green represents park land and recreation. There's also outlining in bright yellow are residential areas that were previously eligible for sound insulation. Those were the areas in which the nearly 800 homes that Justin mentioned were previously sound insulated under the past program the Airport Authority implemented.

So again, this map and graphic shows the existing noise exposure contours that were generated for this study. The outermost solid blue line represents the 65 DNL level. That's the level at which noise sensitive land uses are considered incompatible. And we also show the 70 and 75 DNL, which primarily remains on airport property.

We also show the 60 DNL, that's shown with the outermost dotted blue line. And although 60 DNL is not considered significant impact, it was decided to show the 60 DNL on this map and this study for planning and informational purposes. But again, it's areas within the 65 up to the -- I'm sorry, the areas up to 60 to 65 DNL are not considered significantly impacted based on federal guidelines.

I should also note that the data

collected for this noise exposure contour was collected prior to the slowdown in aviation activity with the COVID-19 outbreak. So we thought it was important to continue to display noise conditions prior to the slowdown in air traffic that was experienced at Columbus and worldwide.

In addition to the noise contour modeling, we conducted -- we also did a land use compatibility analysis to identify noise sensitive land uses within the 65 DNL that are within the 65 DNL. And noise sensitive land uses include residences. We also show estimated population of people within those residences, and then noise sensitive public facilities, which includes schools, daycares, churches, hospitals, nursing homes, and libraries where noise would be a concern. Based on this analysis, using the existing 2020 noise exposure -- or noise contour 65 DNL level, there were zero residential land uses, zero homes within the 65 DNL from this noise contour, and only one noise-sensitive facility and that is a daycare facility that's owned by Franklin County Developmental Services to the north of the airport. And the Airport Authority has coordinated with Franklin County in the past to ensure that the

noise is not an impact on their operations.

So similar to the existing year noise exposure contour, we prepared a future noise exposure contour that looks out five years into the future based on a forecast aircraft activity that was prepared for this study, and that forecast predicts what types of aircraft, how many aircraft operations would occur five years into the future based on trends and economic indicators. And like the existing year contour we -- this forecast was developed and approved by the FAA prior to the COVID-19 outbreak; so it does not exhibit any reduction in service because of COVID-19. And again, we thought it was important to present noise patterns without that temporary condition and slowdown because we expect that aircraft activity will continue to increase over time back to levels prior to COVID-19.

For informational and comparative purposes we also prepared this graphic that shows the future 2025 noise exposure contour compared to previous noise exposure contour that was developed for 2012 conditions, it was actually developed from the 2007 study based on a forecast of what was expected to occur in 2012. And that is showed

using the solid dark gray and dotted dark gray lines. And you can see how much smaller the noise contours have gotten since that 2012 noise contour. And that's primarily due to airline phase out of older, louder aircraft as airline and engine manufacturers -- aircraft engine manufacturers have improved technology, the noise generated by aircraft engines has reduced and the airlines have phased out a lot of those older aircraft in favor of newer, quieter aircraft. And that in turn has an effect of reducing the size of the noise exposure contours. So you can see the 65 DNL of our future 2025 contour is much smaller than the previous 2012 contour was.

Using the 2025 noise exposure contour, we conducted a land use analysis of noise sensitive land uses that are within the 65 DNL of that contour. And we identified two housing units with an estimated population of six people, and still one noise sensitive facility, and it's the daycare center I previously mentioned that was also within the 65 DNL, the existing noise contour. For visual purposes, those two residences I mentioned are within the 65 DNL contour are located to the east of the airport, and the area along Taylor

Station Road and the Waterford Park subdivision. And one of those housing units was in an area that was previously offered sound insulation. So that housing unit would be considered mitigated previously and no longer an impact. And the other housing unit is within a subdivision that was constructed after those noise contours from the previous study was produced and coordination was conducted with the developer of that subdivision to make sure that subdivision was constructed in a manner that would already attenuate noise and would not be an impact upon those land uses. Therefore, those two residences are considered to be not significantly impacted because they are mitigated, or would be assumed to be constructed to attenuate noise on the inside of the homes to acceptable levels.

And again, this map zooms in on the northwest side of the airport where the daycare facility is located, that's owned by Franklin County Board of Developmental Services. It's located on Johnstown Road, just east of the intersection with Stelzer Road, and the Airport Authority continues to coordinate with Franklin County to make sure that facility is not

significantly impacted by airport operations.

So with that, that covers the noise contour modeling portion of tonight's discussion. I would like to add that all of these maps and much larger scale versions and more detailed versions are included on the website, and also printed copies of all of these maps and the official maps with more road labels and much more graphics are available in local libraries for people to review.

So with that I will start to the discuss the actual recommendations for the noise compatibility program that are being presented here tonight for public comment. There are -- as I mentioned, there are three main types of measures that go into a noise compatibility program or NCP. Those include noise abatement measures, which deal with addressing noise at the source, aircraft and how aircraft operate. There are land use measures that deal with either remediating or correcting existing incompatible land uses, like the sound insulation program or other corrective measures. And then preventative measures which deal with preventing the development of new compatible measures around the airport. And then the final category of measures are program management or

implementation measures that include measures to facilitate the implementation of the program and facilitate and assist with program outreach.

So these particular measures from this that are recommended from the study are based on measures that had been previously reviewed and approved through the history of the noise compatibility program at the John Glenn Airport that Justin mentioned. And the measures are listed in order, beginning with noise abatement measure NA-1 and NA-2. And those two measures were previously approved to address noise from engine run-up activity from operations at the NetJet facility, that a number of years ago they constructed a new facility on the north side of the airfield at CMH, and therefore, the run-up policy for how they test their engines was modified to account for that. And there were two basic measures that were included in that. One is to formalize that policy of the location where those run-ups would occur so they would be least impactful to communities to the north of the airport. And then the other measure, NA-2, recommended constructing a noise barrier that would be used to attenuate or block noise from emanating

beyond the facility. So basically aircraft park on the south side of that barrier, and then it blocks the noise that travels from -- traveling far beyond the airport boundary and mitigates noise for residents to the north of I-270 and 670. So both of those measures have been implemented and we are recommending that those measures be continued through this study.

Just for visual purposes, this graphic shows the location of that run-up barrier. It's labeled or shown with the aqua colored dot and labeled Barrier C on the run-up ramp. There are two other run-up barriers on airport property. Barrier A is located to the south of the passenger terminal, and Barrier B is located on the southeast side of the airport.

Measure NA-3 dealt with runway selection. As Justin mentioned, there's the two east-west parallel runways. And this measure deals with how the air traffic control tower staff assign runways at CMH for arriving and departing aircraft at night during the hours of 10 p.m. to 8 a.m. And the air traffic control tower has sole authority to assign and direct aircraft in flight at the airport to ensure safe and efficient travel to and from the

airport. And this measure was implemented many years ago. And it identifies that the north runway, Runway 10L/28R as the more sensitive of the two runways, more noise sensitive. And therefore, it puts some limitations on the use of that runway at night. And this measure previously has been revised to give a little more flexibility to the air traffic control tower personnel to allow use of 10L/28R, if there was an operational need. So as the measure is implemented in the FAA air traffic control tower order, the air traffic controllers have the ability to assign Runway 10L/28R to aircraft if the pilot requests it for operational purposes. Otherwise, aircraft during that time period are assigned to Runway 10R/28L. So this measure is in place, and is implemented by the air traffic control tower staff, and so we are recommending that this measure be continued as-is.

Measure NA-4 deals with the direction of travel at the airport. And as Justin showed earlier, aircraft either operate in an east flow configuration or a west flow configuration. And previous studies identify east flow as the preferred direction for noise compatibility purposes. Meaning aircraft are departing towards

the east, and the land uses towards the east are more compatible. There's more commercial and industrial land there that's more compatible with aircraft operation versus the more heavily residentially populated areas to the west of the airport. So whenever possible it's recommended that aircraft operate to the east or using the east flow configuration. Although, air traffic control tower has the ultimate say in which direction is used. And they monitor weather conditions to ensure that aircraft are taking off based on the optimal wind conditions. As Justin mentioned, it's more beneficial for aircraft to take off into the wind. So when wind conditions are from the west, then aircraft, the FAA typically will be operating in a west flow configuration. Since this measure is in place when wind and operational conditions allow, we are recommending this measure be continued.

Measure NA-5 was the measure that was previously withdrawn during a previous study prior to 2007; so there's no other -- no other reason other than to keep this in there for continuity and numbering so we are not skipping over numbers.

NA-6 deals with flight corridors at the airport. And this particular measure identifies a benefit from a 15-degree divergent turn for departures taking off from Runway 28R, and this graphic here shows a generalized example of how that 15-degree turn would -- where that would be located. So typically aircraft take off straight and maintain course before reaching a certain distance or altitude, but this measure gives the air traffic controllers the flexibility to also turn aircraft on a 15-degree heading to approximately a 295-degree compass heading when departing from Runway 28R when traffic and weather conditions warrant. And this measure also benefits the land uses to the west of the airport and directs aircraft over different areas so different communities get some relief during these times. This measure is in place, and we recommend that this measure be continued as-is.

Measure NA-7 is a recommended measure to create and implement performance-based overlay procedures, which are basically avigation procedures using newer technology. Currently, the FAA around the country are implementing a satellite-based avigation system versus a

ground-based avigation system. Where the aircraft are getting satellite signals and following that signal from point-to-point. And so we are recommending that this measure be continued. The FAA is implementing such procedures at CMH independently of this study, and we expect these procedures will be published and implemented by September of 2021. And these procedures are basically just using satellite technology to help the aircraft fly the routes that they are currently flying now, instead of using ground-based technology.

Measure NA-8 was a measure that was recommended to construct a noise wall near the area in east Columbus, where the runway relocation occurred. And that runway opened in 2013. This noise wall was recommended to be constructed in the area of this green outline along East 13th and East 12th Avenue in between Rarig Avenue and Sterling Avenue. After discussion with the residents in that area, it was determined that this noise berm or wall wasn't desirable, and so therefore, we are recommending that this measure be withdrawn.

Measure NA-9 originally recommended the relocation and potential -- or replacement and

relocation of the ground run-up Barrier B that's located on the southeast airfield. And this was a measure that was recommended because at the time there was a facility at the CMH that would have accommodated larger aircraft than currently operate, and therefore, the existing barrier wouldn't have been able to accommodate those aircraft. Basically the barrier is a two-sided wall that aircraft pull into when they are testing their engines and it blocks the noise on either side, but some of the larger aircraft that might have used this maintenance facility wouldn't have been able to fit within this barrier, because their wing span would have been too wide. Although, that maintenance facility was never constructed; so there was never a need to upgrade that barrier. And the barrier that is in place today is large enough to accommodate the fleet that operates at CMH. So we are recommending to continue this measure, just keep it in the plan if it's ever needed in the future, but we don't foresee it being needed in the near future.

And Barrier B, which again, you can see on this map is located on the southeast side of the airfield is sufficient to accommodate all of

the aircraft that are currently operating at CMH and that are forecast to occur at CMH five years into the future.

So that covers all of the noise abatement measures that are recommended for either approval or some cases withdraw from the program. So I will move on to the land use measures.

Measure LU-1 is the recommendation to continue the sound insulation program that Justin mentioned. And through that program nearly 800 homes had been sound insulated around the airport. We are recommending that this measure be updated based on federal guidelines which say that the sound insulation program boundary should be based on the 65 DNL of the current Part 150 study. So we are recommending that boundary be updated to match the 65 DNL from the future 2025 noise contour, which there are only two homes that are no longer eligible for sound insulation within that boundary. So there would be no new sound insulation as part of this study. Although, we are recommending this program be kept in the study in case it's ever needed in the future.

Measure LU-2 was a program to sound insulate churches within the 65 DNL. And from the

previous studies that were conducted in 2001 and 2007, two churches were identified within the 65 DNL. One church was offered an avigation easement in lieu of sound insulation, and that church accepted the avigation easement and an agreement was reached with the Airport Authority. And the other church did not -- the owners of that church did not respond to any requests for any kind of assistance. So both of those churches are no longer within the 65 DNL and no new churches were identified within the 65 DNL; so therefore, no new programs will be offered. But we are recommending that this measure be kept in the program in case it is ever needed in the future.

Measure LU-3 and a lot of the measures after this are preventative measures that are designed to encourage compatible development and limit incompatible development around the airport.

Measure LU-1 is an ongoing measure that recommends the Columbus Regional Airport Authority and the city of Columbus and Franklin County work to identify and refine their land use controls to make sure that they're compatible with airport operations and aircraft overlay and

following FAA recommendations for land use capability. The airport continues to work with the city and county to make sure their land use and zoning are consistent and meet the needs of the communities.

So measure LU-4 is a similar measure to identify an area within which certain land use controls would be recommended to improve or prevent incapable land uses. And this measure recommends updating the city of Columbus and Franklin County zoning code. Currently, both the city and county have an airport environs overlay district, which is an overlay zone that adds requirements to areas within the existing or future 65 DNL noise exposure contour to ensure that people are aware that those areas are within the area that certain land uses are discouraged. And this recommendation includes expanding that boundary of that overlay district to follow a fixed boundary called an airport land use management district, that instead of following the 65 DNL noise contour, it would be a fixed boundary that follows roads and other physical features that are affixed on a map and don't change over time when noise contours are updated. So the Airport Authority is consulting with the city of Columbus

and Franklin County to investigate the opportunity to implement that measure.

In addition, the Airport Authority has consulted with Franklin County to amend their zoning code to allow the application for a dedication of avigation easements for certain zoning and application including special use permits. And currently, the county zoning code requires an avigation easement for conditional use permits within the airport environs overlay. And the Airport Authority is working with the county to make sure that that measure meets federal guidelines and meets the needs of the community.

Measure LU-6 is another measure to expand the use of the airport land use management district to the city of Gahanna and Jefferson Township. So this measure, like the recommendation for the city of Columbus and Franklin County to modify their airport environs overlay to use the fixed boundary, this recommendation also extends to the city of Gahanna and Jefferson Township, and recommends that they adopt a similar boundary within which to enact certain preventative zoning controls. And the Airport Authority continues to coordinate with those jurisdictions as well to

implement that measure.

And then Measure 7 is a carry-on to the airport land use management district. And it recommends that subdivision codes be adopted within the airport land use management district to ensure that any new development, residential development is notified of the location in relation to the airport. And make sure that the development meets certain sound attenuation and building code guidelines to make sure that the interior noise from that development doesn't exceed permissible levels.

And then measure LU-8 would seek to adopt certain building codes within that airport land use management district to attenuate noise for new construction within those areas.

Measure LU-9 is a measure recommended to seek cooperation from the Board of Realtors to help disclose to new home buyers the location of homes within the airport land use management district. That's recommended to make sure that no new home buyers are surprised by noise levels if they purchase a home, and are unaware of the location in relation to the airport. This measure would attempt to prevent that. And the

airport continues to coordinate with realtors to enact or implement that program.

In addition, the Airport Authority implements measure LU-10 to periodically notify residents through newspaper advertisements and other media outlets of the location of the noise contours and recommended land use management district, just so everyone is aware of the location in relation to the airport and people can plan accordingly.

Measure LU-11 was a measure that was previously withdrawn prior to the 2007 study, and is no longer necessary.

And then measure LU-12 was the measure to actually delineate the airport land use management district based on the 65 DNL noise contour boundary, but then expanding that area to follow natural features, such as roads or jurisdictional boundaries. So it was a fixed boundary on a map versus a noise contour that can fluctuate over time when the study is updated.

So that ends the land use management measures that are recommended for continuation in this study. And then there's several program management measures that are recommended for

continuation.

Program management measure PM-1 includes coordinating with the air traffic control tower to make sure that the noise abatement recommendations of the study are documented in the FAA tower order and that measure has been implemented. And efforts would continue to make sure that those noise abatement actions and elements are maintained and updated and revised accordingly, and implemented through the FAA's tower order.

Measure PM-2 includes operation of the noise management office that Justin mentioned, and that includes the noise inquiry hotline and other staff functions to provide information to the public about aircraft operations at the airport.

And then measure PM-3 includes an ongoing public outreach program related to noise compatibility. And as part of that outreach program, the Airport Authority monitors their Webtrak system and can provide information to the public from that system. It has access to FAA radar data, it can research operations that occur that may have caused someone to ask about a particular operation that may have been out of the

ordinary. And they can research what happened and why an aircraft may have flew in a location and provide information to the public from that system. So we recommend that all of these measures be continued as-is.

Measure PM-4 includes the maintenance and operation of the airport's permanent noise monitoring system. The airport currently has 16 permanent noise monitors that measure noise 24 hours a day, 365 days a year around the airport, just to make ensure that noise levels are consistent with what our modeling predicts. And they can also measure noise from individual aircraft events and provide information to the public about particular aircraft operations. So we would recommend that this measure be continued and they maintain the 16 permanent noise monitors that they have. They recently added four more monitors to bring their total up to 16 and upgraded the monitors themselves, upgraded the hardware and software system. And so we recommend they continue to maintain that system and update that system as needed.

Measure PM-5 includes the periodic updates of noise exposure contours and the noise

program. The FAA recommends that noise contours be reviewed and updated if needed every five years or when conditions warrant. So we recommend that that process continue.

And then PM-6 was a recommended land use compatibility task force that would meet periodically to discuss relevant issues about noise and airport land use compatibility. That task force is not active at this time. Although, we would recommend that that measure be continued as needed.

MR. ANDERSON: And, Chris, real quick on that last one. Although that task force is not active at this time, the planning department at the Airport Authority we do work closely with our local entities, city of Columbus, Gahanna and Franklin County to ensure that the land use around the airport is as compatible as can be. And we help with other things too, such as ensuring that no tall structures impact the approaches and departures and procedures at the airport. So we do have a working relationship with our surrounding communities; although, there is no designated land use compatibility task force at this time.

MR. SANDFOSS: Okay. Thank you.

With that I will go over the next steps in the study. So as we are here tonight we are accepting comments on the study tonight, and through August 13th comments can be submitted through the mail or through e-mail. I have got the address on the next slide. Once we receive all of those comments, we will review those comments and respond to those comments in the document that will be published and submitted to the FAA for review and approval. We expect to submit that final document that will go to the FAA in the fall of this year. And it will include all of the comments and responses that we received through this comment period. The FAA will review that study and we expect the FAA would approve this study and the noise compatibility program updates by spring or early summer of 2022.

So there are three ways that we are accepting comments on the study. Tonight here we will open up the session, the public hearing in just a few minutes, and we will be here through 7:00 p.m. to accept comments, or comments can be submitted online. There is a form you can submit comments online, and they are e-mailed directly to the study team using that website, or

comments can be submitted through the US mail to that address on the screen there. We just ask comments be submitted to us by August 13th.

So with that, we will start the public hearing, and I will turn things back over to Marie to facilitate that.

MS. KEISTER: Great. Thank you so much, Chris.

- - -

START OF PUBLIC HEARING

- - -

MS. KEISTER: We gave you a lot of information and we are concluding the public information portion and starting the public hearing portion. And as Chris said, we will be accepting your comments through August 13th. And you will see again that those comments, how you do that in that last bullet.

I also want to remind you that the Q&A function tonight that we have been using as we've gone along with the meeting, those comments don't go on the record like your public hearing comments will. So when I officially open the public hearing in just a minute, I give a little opening to prepare you. And then our court

reporter, who is Angie Moore, this afternoon will be recording all of your comments. You have a raise hand function on your screen. So if you would do that, if you would like to make a comment, or if you dialed in by phone, if you press star nine on your keypad that will indicate to us that you are wanting to give testimony.

The transcript will be included in the final Part 150 document. I will give you each up to three minutes to speak. Those that wish to speak longer may request to speak again. I am going to be watching for the order in which you raise your hand and calling on you in that order. Offensive language, of course, will not be tolerated. We ask that you be respectful. Otherwise, we do have the right to remove you from the meeting, but I know that will not be an issue.

So at this time, what I would like to say is I am Marie Keister. I will serve as the hearing officer for tonight's public hearing. We are providing you an opportunity to comment on the program update for the John Glenn Columbus International Airport for the Part 150 Noise Compatibility Program. All comments, along with the prepared responses, will be included in the

official record of the final Part 150 Noise Compatibility Program update, which Chris has explained.

As I already mentioned, people who want to submit oral comments, can request to speak by using the hand raise button on your screen. I think I have already covered everything else. So at this time, I'm asking you to raise your hand, or to indicate if you have testimony that you would like to give.

Okay. I just saw a hand raised. Bear with me, make sure my screen --

Okay. Nick, I will ask for your assistance, if you can identify if you see any hands raised to speak. I am not able to see that yet.

Okay. I'm looking at the attendees, I'm not seeing anyone with a raised hand to speak.

All right. Deb Krantz, I am going to call on you. We are unmuting you, but please also unmute as well.

MS. KRANTZ: Do I need to, like, speak slowly. Is this for the record?

MS. KEISTER: Yes. I would like to have you say your name and address, and I will give

you three minutes.

MS. KRANTZ: Okay. I'm actually going to repeat something that I put in the Q&A section; so it won't take me that long.

But my name is Deb Krantz, I'm at 2625 River Look Drive in the Village at Eastern Glenn subdivision, just west of the outline of the 65 -- is it DL sound barrier?

MS. KEISTER: Yes.

MS. KRANTZ: So technically, we are in the 60 DL area, but just outside of that. Earlier in the presentation, I thought there was something about limiting plane traffic on the north runway between 10 p.m. and 6 a.m. And as our homes are just west of this north runway, just outside of that sound area, we do have what I believe are daily flights taking off from that runway going to the west between 5:30 a.m. and 6:00 a.m. One in particular seems pretty regular between 5:30 a.m. and 5:36 a.m. But we do have other flights that I can hear from 5:50 and 6:00 a.m. and a little bit after that. We do occasionally have flights coming from the west after 10:00 p.m. And I have seen them as late as 1:00 and almost 1:30 a.m. And I wondered how these -- perhaps these are anomalies,

but they seem pretty regular to be anomalies, how those are going to be factored into the study.

MS. KEISTER: I will just remind you again, Deb, we are not responding. We are taking testimony tonight. So if you have any remaining comments and then we will be responding later through the final document.

MS. KRANTZ: Understood.

MS. KEISTER: Thank you. Any other comments? You have another minute or two if you'd like.

MS. KRANTZ: No. I just will say I'm glad this is being revisited. It's something that the North Central Area Commission had intimated some time ago, and COVID probably put a little bit of a damper in terms of the pursuit of some of these noise questions. I'm delighted it's at least being addressed. Thank you.

MS. KEISTER: Thank you, Deb.

All right. I'm looking for more hands and don't see any yet.

While I'm watching for those hands, I will just make a comment to repeat what Chris said. We will be writing a meeting summary and grouping comments and questions, and we will be

preparing responses to those questions. And those will be both in the final report, but also posted on the website this fall as well. So you will have a chance to see a response.

All right. I'm seeing about 12 people here. I've heard from Deb, would love to hear from some other folks out there.

Remember, we are here until 7:00 o'clock so we are eager to hear your comments.

So if you are out there, sitting there silently, wondering what can I ask, what can I say, please don't be intimidated. You don't have to have a whole idea formulated. If you just want to get a question on the record somebody can respond to later, we would love to have it.

I will also note we have three people who dialed in on telephones, and it may be a little more awkward to indicate you want to make a comment. If you would like to make one, I encourage you to go ahead and unmute, I believe it's star nine, and that would make it possible for you to make a comment as well.

So the other thing I am going to remind you is that you can mail your comments, you can e-mail your comments, you can go online and see

the presentation that was given tonight. And there are -- you can blow up those maps and look at them more thoroughly. You can look at the recommendations. And you are also welcome as you look at those recommendations to refer to specific slides where you may have questions and just submit those through the website and by mail. And I can validate that this team that is on here tonight will go through every word and every question. We have already received some nice comments and questions from our partners that the team will be following up on.

So any other comments out there or comments?

In case you are wondering why we are still sitting here, we are going to be here until 7:00 o'clock in case anyone should come in at the last minute or have, you know, had a conflict and they just don't get onboard until 6:55. So we will be here, but we will not be sharing any more content between now and then. We are just standing by in case any of you have any questions.

Thank you, by the way, for those of you who attended tonight. If you do share this information, we'd really appreciate it. We would

invite any public comments. If you are part of an organization that would be interested in sharing information, that would be really greatly appreciated. And I see that Deb Krantz is doing that. So thank you, Deb, we appreciate it.

I'm just going to tell you we are still here, hanging out, waiting for any questions.

I want to let our listeners on the phone know that we are still here, and still eager to take your testimony if you have any. And we will just continue to stay here until 7:00 o'clock.

So it's 6:45, and we are just standing by in case anybody has any final testimony, or in case somebody around me wants to weigh in. If you are listening, we are eager to hear you provide any testimony. Thank you.

We have 10 minutes remaining in the public hearing; so still have time before I close everything at about 6:59 p.m., if you would like to give testimony.

I'll just note the five-minute countdown.

So it's 6:59, I think I'm probably safe in closing the public hearing at this point. So thank you everybody, and we will now close out

the recording as well.

Thank you.

- - -

Thereupon, the meeting concluded at approximately 7:00 p.m.

- - -

C E R T I F I C A T E

- - -

THE STATE OF OHIO:
SS:
COUNTY OF FRANKLIN:

I, Angela S. Moore, a Professional Reporter and Notary Public in and for the State of Ohio, do hereby certify that the foregoing is a true, correct, and complete written transcript of the proceedings in this matter;

That the foregoing was taken by me stenographically and transcribed by me with computer-aided transcription;

That the foregoing occurred at the aforementioned time and place;

That I am not an attorney for or relative of either party and have no interest whatsoever in the event of this litigation.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal of office at Columbus, Ohio, this 30th of August, 2021.

/s/Angela S. Moore
Notary Public, State of Ohio

My Commission Expires: February 28, 2026.

- - -

John Glenn Columbus International Airport
Part 150 Noise Compatibility Update Study

Public Information Meeting #3 / Public Hearing

Date: Thursday, July 29, 2021
Time: 5:30-7:00pm
Location: Online video conference meeting (using Zoom Webinar)

Public Meeting/Hearing Summary

Meeting Purpose

To inform residents and interested parties about the Part 150 Noise Compatibility Study and provide an opportunity for the public to provide written and verbal questions or comments.

Attendance

18 participants attended the virtual public meeting/hearing.

Overview

A virtual public information meeting and public hearing was held on Thursday, July 29 from 5:30 to 7:00pm using Zoom Webinar. Meeting attendees were required to pre-register for the meeting and asked to send any project related questions or comments prior to the meeting. Attendees were also able to write questions and provide comments in the Q&A box during the virtual meeting. Most attendees logged in within the first few minutes after 5:30 PM.

Marie Keister, Engage Public Affairs, moderated the meeting. Justin Anderson, Columbus Regional Airport Authority (CRAA) Project Manager, welcomed everyone to the meeting and introduced the study. A presentation on the background, findings, and recommendations of the Part 150 Noise Compatibility Study was led by Justin Anderson and Chris Sandfoss, Project Manager, Landrum & Brown, Inc. (L&B). Justin explained the runway configuration at John Glenn Columbus International Airport (CMH) in relation to noise levels for surrounding residents and businesses. Chris discussed baseline noise exposure contour, land use compatibility, the CRAA's Noise Compatibility Program (NCP) recommendations and next steps for accepting public comments and submitting the NCP for Federal Aviation Administration (FAA) approval.

The public meeting presentation covered the following topics:

- What's happening at CMH
- Part 150 Noise Compatibility Study Process
- Noise Compatibility Planning at CMH
- Existing and Future Baseline Noise Exposure Contours

- Recommended Noise Compatibility Program (NCP) Measures
- Next Steps

The presentation lasted approximately 45 minutes. A PDF version of the public meeting presentation was also made available to the public on the project website, at https://www.airportprojects.net/cmh-part150/home/public-meetings/. Printed copies of the presentation were also made available, by request, at the Columbus Regional Airport Authority (CRAA) office at the John Glen Columbus International Airport. Rob Adams, L&B, responded to the questions submitted through the Q&A window in writing during the meeting.

The public meeting and presentation portion of the webinar ended just after 6:15pm. The public hearing immediately followed the public meeting with the project team staying on the call until 7:00pm. The public was given the opportunity to submit additional comments and/or questions online through the project website's contact page or mail by August 13, 2021.

Public Meeting Questions and Comments

The following is a summary of comments received during the public hearing. Comments sent during the official comment period are included. All questions, comments and responses will be included in the Final Part 150 Study Document.

Question: A question was asked about the types of sound insulation treatments that were used in the Airport's residential sound insulation program.

Response: The sound insulation program uses a variety of treatments that included new windows, insulation in attics, sound insulated doors, etc. Each type of home was evaluated to understand what treatments would achieve the required noise reduction.

Question: Is the data from the 16 noise monitors located on the CRAA website?

Answer: Yes, the website includes the data from the noise monitors that measure noise from aircraft activity around the airport. The data can be found online here: https://webtrak.emsbk.com/cmh2.

Question: A question was asked about limiting plane traffic on the north runway between 10:00pm-6:00am. The commenter noted there are daily flights taking off from the north runway to the west between 5:30am and 6:00am, as well as occasional flights landing from the west between 10:00pm and 1:00am. How is this factored into the study?

Answer: This comment will be addressed in the Final Part 150 Study Document.

Question: Comment about addressing the noise problems experienced as the aircraft turn south from their East-West take off. Why aren't there monitors to register sound in those areas?

Answer: This comment will be addressed in the Final Part 150 Study Document.

Meeting/Hearing Notification

To notify the public, the following communication channels were used.

- Legal advertisements:
  - Columbus Dispatch (6/21)
  - ThisWeek (6/24) – Bexley, Gahanna (Rocky Fork), Reynoldsburg and Whitehall
- Print advertisements:
  - Minority Communicator (6/24)
  - Columbus Dispatch (6/28)
  - ThisWeek (7/1) – Bexley, Gahanna (Rocky Fork), Reynoldsburg and Whitehall
  - La Mega Nota (7/1)
- Digital advertisements - Dispatch Media Group (7/22 to 7/28)
- E-Blast – CRAA Constant Contact (7/15 and 7/28)
- Social media posts – CRAA Facebook, Twitter and LinkedIn (7/22)
- Website announcement – project website (6/21)
- Technical Advisory Committee email announcement (6/15)

Staff/Consultant Participants

Justin Anderson	*Columbus Regional Airport Authority*
Mark Kelby	*Columbus Regional Airport Authority*
Rob Adams	*Landrum & Brown, Inc.*
Gaby Elizondo	*Landrum & Brown, Inc.*
Chris Sandfoss	*Landrum & Brown, Inc.*
Marie Keister	*Engage Public Affairs*
Nick Hoffman	*MurphyEpson Inc.*
Liz Webb	*MurphyEpson Inc.*

This page intentionally left blank

Response to Comments from July 29, 2021 Public Hearing

This section includes the official comments that were received during the Public Hearing and comment period for the Part 150 Noise Compatibility Program Update for the John Glenn Columbus International Airport. There were two comments (Comment 1 and Comment 2) submitted during the Q&A portion of the Public Workshop. Two comments (Comment 3 and Comment 4) were made during the oral testimony portion of the Public Hearing. One comment (Comment 5) was submitted via email during the public comment period. These comments and responses to these comments are provided in the following pages.

Comment Number	Commenter	Comment	Response
1	Richard Anthony	Question about the types of sound insulation treatments that were used in the Airport's residential sound insulation program.	The sound insulation program uses a variety of treatments that included new windows, insulation in attics, sound insulated doors, etc. Each type of home was evaluated to understand what treatments would achieve the required noise reduction.
2	Kevin Poole	Is the data from the 16 noise monitors located on the CRAA website?	The website includes the data from the noise monitors that measure noise from aircraft activity around the airport. The data can be found online at: https://webtrak.emsbk.com/cmh2.

Comment Number	Commenter	Comment	Response
3	Deb Krantz	Earlier in the presentation I thought there was something about limiting plane traffic on the north runway between 10pm-6am. There are daily flights taking off from the north runway to the west between 5:30am and 6:00am, as well as occasional flights landing from the west between 10:00pm and 1:00am. One in particular seems pretty regular between 5:30-5:36am. But we do have other flights I can hear from 5:50-6:00am and a little bit after that. We do occasionally have flights coming from the west after 10:00pm, and I've seen them as late as 1:00 or 1:30am. And I wonder perhaps if these are anomalies? But they seem pretty regular to be anomalies. How is this factored into the study?	Noise abatement Measure NA-4 of this NCP and the current FAA Airport Traffic Control Tower Order includes limitations on nighttime flights on the north runway (Runway 10L/28R). 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. Airport Traffic Control Tower personnel have the ability to assign runways in order to maintain efficiency and safety. If a pilot that requests the use of Runway 10L or 28R that request is granted by ATCT personnel. Airlines and airport operators at John Glenn Columbus International Airport (CMH) are permitted to schedule flights to meet demand. Airlines schedule flight times based on the times passengers want to fly. Airlines do have scheduled departing flights at CMH between 5:30am and 6:00am and scheduled arrivals between 10:00pm and 1:00am. These flights may operate on Runway 10L/28R if there is an operational or safety need or to accommodate a pilot's request. These early morning and late-night operations are factored into the noise contour modeling that was conducted for this Study. The noise modeling calculations include an additional 10 decibel penalty for aircraft operations that occur between 10:00pm and 6:59am.
4	Deb Krantz	I am glad this (noise compatibility study) is being revisited. It's something that the North Central Area Commission had intimated some time ago and COVID probably put a bit of a damper in terms of the pursuit of some of these noise questions. But I'm delighted that it's at least being addressed.	This comment has been included in the official record.

Comment Number	Commenter	Comment	Response
5	Pat James	Comment about addressing the noise problems experienced as the aircraft turn south from their East-West take off. Why aren't there monitors to register sound in those areas?	Flight routes to and from the Airport are established by the FAA and assigned by FAA Airport Traffic Control Tower personnel to ensure safety and efficiency. The 16 permanent noise monitors around the Airport are located in the areas to the east and west of the Airport that experience the most aircraft overflights. Additional field noise monitoring was conducted for this Study at other locations to supplement the data from the 16 permanent noise monitors. Additional locations were selected to the southeast of the Airport. Locations were selected based on the proximity to flight routes and the absence of non-aircraft noise sources such as automobile traffic noise.

This page intentionally left blank

Public Hearing
January 30, 2025

Newspaper Notices

Meeting Display Boards

Public Comments

Responses to Comments

This page intentionally left blank

January 2025 Public Hearing Newspaper Notices

This page intentionally left blank

LOCALiQ
The Alliance Review | Ashland Times Gazette
The Daily Jeffersonian | Record-Courier
The Daily Record | The Repository
The Times-Reporter | The Independent
Akron Beacon Journal | Columbus Dispatch

PO Box 630599 Cincinnati, OH 45263-0599

AFFIDAVIT OF PUBLICATION

Landrum & Brown
4445 Lake Forest Drive #700
Cincinnati OH 45242

STATE OF OHIO, COUNTY OF FRANKLIN

The Columbus Dispatch, a newspaper printed and published at Columbus, Franklin County, Ohio, and of general daily circulation, and personal knowledge of the facts herein state and that the notice hereto annexed was Published in said newspapers in the issue dated on:

12/30/2024

and that the fees charged are legal.
Sworn to and subscribed before on 12/30/2024

Legal Clerk

Notary, State of WI, County of Brown

3.7.27

My commission expires

Publication Cost:	$697.09	
Tax Amount:	$0.00	
Payment Cost:	$697.09	
Order No:	10887566	# of Copies:
Customer No:	1504624	0
PO #:	LWOO0213708	

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

KAITLYN FELTY
Notary Public
State of Wisconsin

Legal Notice
John Glenn Columbus International Airport
Draft Part 150 Noise Compatibility Study and Public Hearing

The Columbus Regional Airport Authority (CRAA) will hold a Public Information Meeting/Hearing regarding the Part 150 Noise Compatibility Study Update being conducted for the John Glenn Columbus International Airport. The Meeting/Hearing will be held from 5:00 p.m. to 8:00 p.m. on January 30, 2025 at the Columbus Airport Mariott, 1375 N Cassady Avenue, Columbus, OH 43219. Airport staff and noise consultants will be available at the Public Information Meeting to answer questions and provide information regarding the Study Update. Comments received at the Public Hearing will become part of the Final Part 150 Noise Compatibility Study Update Report to be submitted to the Federal Aviation Administration (FAA) for review. CRAA has published a Draft Part 150 Noise Compatibility Study Update Report. Copies of this report will be available for public review beginning December 30, 2024, at the following locations:

- Columbus Regional Airport Authority, John Glenn Columbus International Airport, Administrative Offices, 4600 International Gateway, Columbus, OH 43219. Please call (513) 818-0617 to set up an appointment.
- Columbus Metropolitan Library - Main Branch, 96 South Grant Avenue, Columbus, OH 43215, (614) 645-2275
- Columbus Metropolitan Library - Gahanna Branch, 310 Granville Street, Gahanna, OH 43230, (614) 645-2275
- Columbus Metropolitan Library - Linden Branch, 1990 Jefferson Avenue, Columbus, OH 43211, (614) 645-2275
- Columbus Metropolitan Library – Martin Luther King Branch, 1467 East Long Street, Columbus, OH 43203, (614) 645-2275
- Columbus Metropolitan Library - Reynoldsburg Branch, 1402 Brice Road, Reynoldsburg, OH 43068, (614) 645-2275
- Columbus Metropolitan Library - Shepard Branch, 850 North Nelson Road, Columbus, OH 43219, (614) 645-2275
- Columbus Metropolitan Library - Whitehall Branch, 4445 East Broad Street, Columbus, OH 43213, (614) 645-2275
- Bexley Public Library, 2411 East Main Street, Columbus, OH 43209, (614) 231-2793
- Online: www.airportprojects.net/cmh-part150/home/documents-reports/

Comments on the Draft Part 150 Noise Compatibility Study Update Report may be submitted to: Chris Sandfoss, Project Manager, Landrum & Brown, 4445 Lake Forest Drive, Suite 700, Cincinnati, OH 45242; or by email to: CMH-P150@landrumbrown.com. All comments must be received by February 14, 2025. If special accommodations, such as audio or visual assistance, are required to participate in the meeting, please contact (513) 818-0617 by January 20, 2025.

December 30 2024
LWOO0213708

Celebrate the New Year with
$350 OFF
2,025 adventures in 2025
it's more extraordinary with
exodus
ADVENTURE TRAVELS
The Leader In Adventure Travel
Exclusive offer on expertly guided small-group tours now until January 20.
— 8 DAYS — THE AMALFI COAST
— 14 DAYS — VIETNAM ADVENTURE
— 15 DAYS — DISCOVER COSTA RICA
— 8 DAYS — CYCLING CROATIA'S DALMATIAN COAST
Discover More Award-Winning Tours
614-965-6462
exodus ADVENTURE TRAVELS
Traveller 2024
NATIONAL GEOGRAPHIC TRAVELLER BEST OPERATOR
Trustpilot Rated EXCELLENT

GET YOUR IDEAL BATH OR KITCHEN IN JUST
DAYS not weeks
SHOWER = 1 DAY | WHOLE BATHROOM = 4 DAYS | KITCHEN = 7 DAYS
$0 DOWN | 0% INTEREST | $0 PAYMENTS
FOR UP TO 21 MONTHS • FREE DESIGN CONSULTATION
*for those who qualify
Sunday Monday Tuesday Wednesday Thursday Friday Saturday
START Kitchen Remodel
DONE in 7 DAYS!
DONE New Shower in 1 DAY!
DONE Whole Bathroom in 4 DAYS!
SB + K SIMPLE BATH + KITCHEN
614-965-6394
http://simplekitchenoh.localconsumer2.info/
Don't go weeks or months with a bath or kitchen in disarray, contact us for your free, no-pressure estimate!

Lawrence Tower, a former Holiday Inn turned Ohio State dorm on Lane Avenue, had become a health concern during fall semester after a water leak on the building's 11th floor led to drywall damage. All students were evacuated after some residents said that water damage caused mold and mushrooms to grow behind the wallpaper in their dorms.
ADAM CAIRNS/COLUMBUS DISPATCH

Tower

Continued from Page 3A

Lawrence Tower has more than 130 rooms, housing one to four students. Most of those rooms listed by the university as Rate 1, considered the top-tier dorms on campus and cost $5,045 a semester, according to the university's housing website. Lawrence Tower also includes some Rate 2 rooms, costing $4,203 a semester.

Foster said she and her roommates started to see mold on the bathroom ceiling above the shower within a few weeks, so she called for maintenance to remove it. Soon after that, she said, they noticed mold behind the bathroom wallpaper.

Other students in Lawrence Tower reported similar issues in their bathrooms. The university initially moved about 40 students from 19 rooms to other dorms on campus, and Foster was among them.

When university officials eventually made the decision to relocate all of the building's residents before the end of fall semester, Foster and her roommates were given their housing options. One roommate moved into a new on-campus dorm. The other canceled her housing contract and found her own apartment. And Foster was placed at The Verve.

Foster is living in a four-bedroom apartment with six other roommates this semester. While her living conditions have improved and she said it's nice not to worry about mold, Foster said the move has been difficult for other reasons.

She got a part-time job at College Traditions, which was a two-minute walk from her front door. Now, walking to work takes at least 40 minutes, she said.

Transportation is also an issue. The Verve is located on North High Street at King Avenue, several blocks south of the farthest Ohio State Campus Area Bus Service, or CABS, line. Foster said most of her classes were scheduled around north campus to be close to Lawrence Tower, which is more than a mile walk. Navigating the COTA system hasn't been the easiest, she said, so she tries to coordinate traveling to and from campus with her new roommates as much as possible.

Foster said she hasn't received any more communication from Ohio State about Lawrence Tower or her housing situation. Now that she lives off-campus, she said she feels out of view.

Between being an out-of-state and a first-generation college student, Foster said it's been a chaotic freshman year.

"I just feel so far from campus," she said. "It's been a mental battle."

Ohio State parents sue university over Lawrence Tower

Parents of 32 Ohio State University students filed a lawsuit against the university Monday in Franklin County Common Pleas Court, alleging the university violated the Ohio Consumer Sales Practices Act.

The lawsuit says students began experiencing respiratory symptoms, including consistent coughs, after living in the dorm.

"The excitement of the first semester of college – new school, new friends, and academic aspirations – was soon replaced by consistent coughs, brain fog, and other respiratory symptoms they could not easily shake," according to the lawsuit.

Foster, the student now living at The Verve, is not among the plaintiffs.

Multiple parents of Ohio State students living in Lawrence Tower took matters into their own hands and hired Mold Mentor, a Columbus-based mold remediation company, to test rooms for mold. Those tests found 27 of the 28 rooms tested came back positive for high levels of mold, according to that report.

The university said Wednesday that it was "unaware of the testing protocol utilized for these tests" but still notified residents in those 28 rooms that they could submit a request to change rooms.

Ohio State spokesperson Dave Isaacs said in November that Ohio State was conducting its own air-quality testing through the university's Office of Environmental Health and Safety and a university-contracted vendor for all rooms in Lawrence Tower. The report had not yet been completed when The Dispatch first reported on it, but Isaacs said "early review indicates that most rooms are within the expected range when compared to the immediate outdoor environment."

Parents are seeking at least $1,000 and up to $5,000 per student for damages.

Amy Nietfeld, an Ohio State parent who joined the lawsuit, said she remembers asking her son to pull back the wallpaper in his Lawrence Tower bathroom and text her a picture of what he saw.

"The mold was as black as black could be," Nietfeld, of Galena, said.

Nietfeld said her son has at least a 40-minute walk to all of his classes, and the closest dining hall to The Verve is about a 30-minute walk. "That's three hours of his day just walking to get a meal," she said.

Neitfeld said she and other parents of Lawrence Tower students, whether they've joined a lawsuit or not, are worried that the university is overlooking their students' safety. She said she's received multiple texts from her son about reports of stabbings and shootings in the University District near his new apartment.

"There's been a lot of miscommunication and not a lot of putting our students first," Nietfeld said.

"The only way things will change is if we get loud," she added.

Ohio State did not answer questions by The Dispatch related to any updates on the air-quality testing performed by the university in November, if Ohio State would consider temporarily expanding CABS services, or about updates on the future of Lawrence Tower, stating it did not have any updates to share.

shendrix@dispatch.com
@sheridan120

PUBLIC MEETING/HEARING
John Glenn Columbus International Airport
Part 150 Noise Compatibility Study
Thursday, January 30, 2025, 5–8 PM
Columbus Airport Marriott
1375 N Cassady Ave., Columbus, Ohio, 43219
No formal presentation is planned. Stop by any time between 5 PM and 8 PM to view materials on display and submit a comment. Airport staff and consultants will be available to answer questions and provide information.
More information is available online:
www.airportprojects.net/cmh-part150/home/public-meetings
COLUMBUS REGIONAL AIRPORT AUTHORITY
JOHN GLENN INTERNATIONAL

This page intentionally left blank

January 2025 Public Hearing Sign-in Sheets

This page intentionally left blank

JOHN GLENN COLUMBUS INTERNATIONAL AIRPORT

PART-150 UPDATE

PUBLIC HEARING

January 30, 2025, 5:00 P.M. to 8:00 P.M.

SIGN-IN FORM

NAME (PLEASE PRINT)	ADDRESS	PHONE NUMBER (INCLUDE AREA CODE)
Rick Shafer	791 Cedar Run Dr	614-361.0180
MIKE GREINER	909 HARMONY DR.	614 476 1542
Matthew Satterwhite	1085 Poppy Hills Dr.	614-273-4760
Vickie Cage	1736 East 25 Ave	(614)267-5290
LOLA HAM	2706 KENILWORTH RD	614-258-1464
Wanda J Dillard	1089 Wildwood Ave	614-886-1866
ANDRE' ROSS	2345 SOMERSWORTH DR	614-402-5407
Richie Dammerling	6778 Estate View Dr N	330 418 6159
Donna Cotton	1040 Wildwood Ave	220-219-8990
Lori & Ed Sachs	3140 Denver Ave	614.578.2345
Logan Frank	1320 Highland St.	614-530-0955
Eric Pyers	132 Creekside Green Dr.	812-592-2547

JOHN GLENN COLUMBUS INTERNATIONAL AIRPORT

PART-150 UPDATE

PUBLIC HEARING

January 30, 2025, 5:00 P.M. to 8:00 P.M.

SIGN-IN FORM

NAME (PLEASE PRINT)	ADDRESS	PHONE NUMBER (INCLUDE AREA CODE)
Peggy A. Williams	1562 Cleveland Ave Columbus Ohio 43211-2708	(614) 372-5006 mspegan8@gmail.com
KEN FARBER	1353 ELKHORN DR BLACKLICK OH	kfarber@farberspecialty.com
Tony Celebrezze	111 N Front ST 43215	614 645 6769
Devin Deal	1393 E Broad St.	614-715-3597
MARY E COTTON	1060 WINDWOOD AVE 43219	614-607-2671
Dan Van-	344 Rivers Encl Rd 43230	—
Lloyd Hooper	2517 BETHESDA AVE	614-252-2270
Reggie McMillan	1700 Marina Dr	614-563-7370
Pamela Jackson	1917 Brentnell	614 323-6738
Ciera JACKSON	1917 Brentnell Ave	614-664-6684
Aswara Williams	1333 Sigsbee Ave	(937) 304-4068
JIM THOMPSON	37 N. EVERETT AVE COLS, OH 43213	614-235-6682

JOHN GLENN COLUMBUS INTERNATIONAL AIRPORT

PART-150 UPDATE

PUBLIC HEARING

January 30, 2025, 5:00 P.M. to 8:00 P.M.

SIGN-IN FORM

NAME (PLEASE PRINT)	ADDRESS	PHONE NUMBER (INCLUDE AREA CODE)
Reno Lemons	2038 Penrose DR	614-271-6884
Greta Winbush	1377 Gardendale Dr.	OH- ~~60~~ 614-327-~~253~~-7899

JOHN GLENN COLUMBUS INTERNATIONAL AIRPORT

PART-150 UPDATE

PUBLIC HEARING

January 30, 2025, 5:00 P.M. to 8:00 P.M.

SIGN-IN FORM

NAME (PLEASE PRINT)	ADDRESS	PHONE NUMBER (INCLUDE AREA CODE)
Liliana Marin	1272 Brookcliff Ave. 43219	-- 614 371 5572

January 2025 Public Hearing Display Boards

This page intentionally left blank

Welcome to the Public Workshop

Part 150
Noise Compatibility Study

John Glenn Columbus International Airport

JOHN GLENN INTERNATIONAL

Part 150 Noise Compatibility Study Process

Essential Elements of a Part 150 Study

Noise Exposure Maps (NEMs)	Noise Compatibility Program (NCP)	Public Involvement
• Description of the noise levels for existing and future (+5 years) conditions	• Recommendations for reducing, minimizing, and/or mitigating aircraft noise and land use conflicts – Noise Abatement – Land Use Mitigation – Program Management Measures	• Advisory Committee • Online Presentations • Public Workshop • Public Hearing & Formal Comment Period

JOHN GLENN INTERNATIONAL

History of Noise Compatibility Planning

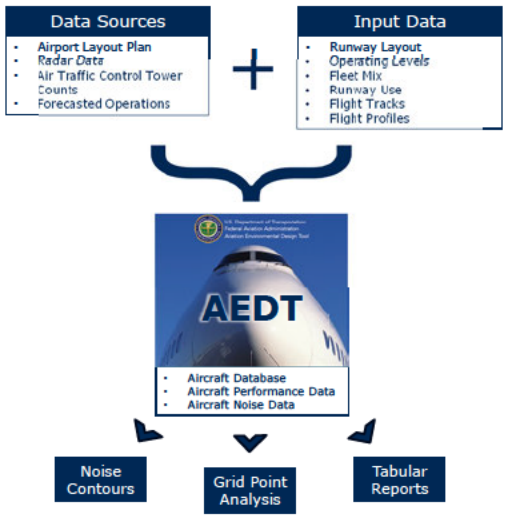
Previous Part 150 Studies Completed at CMH

- 1987 Part 150 Study (original)
- 1993 Part 150 Study Update
- 1999 Part 150 Study Update
- 2001 Noise Exposure Map Update
- 2007 Part 150 Study Update
  - Conducted concurrently with the Environmental Impact Statement (EIS) for relocation of the south runway
  - FAA Record of Approval in 2008
- This Part 150 Study began in 2020
  - Due to the effects of COVID-19 the study was delayed and is now being updated.

JOHN GLENN INTERNATIONAL

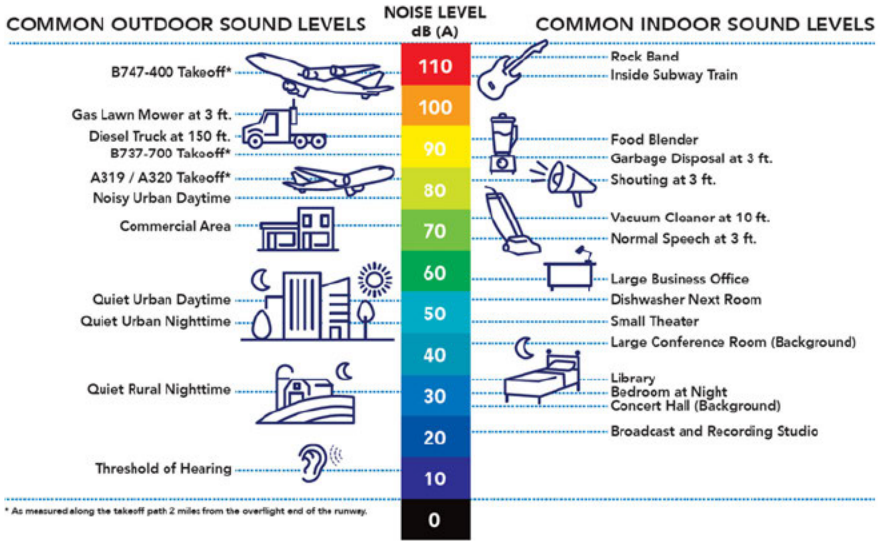
How Noise Contours Are Generated

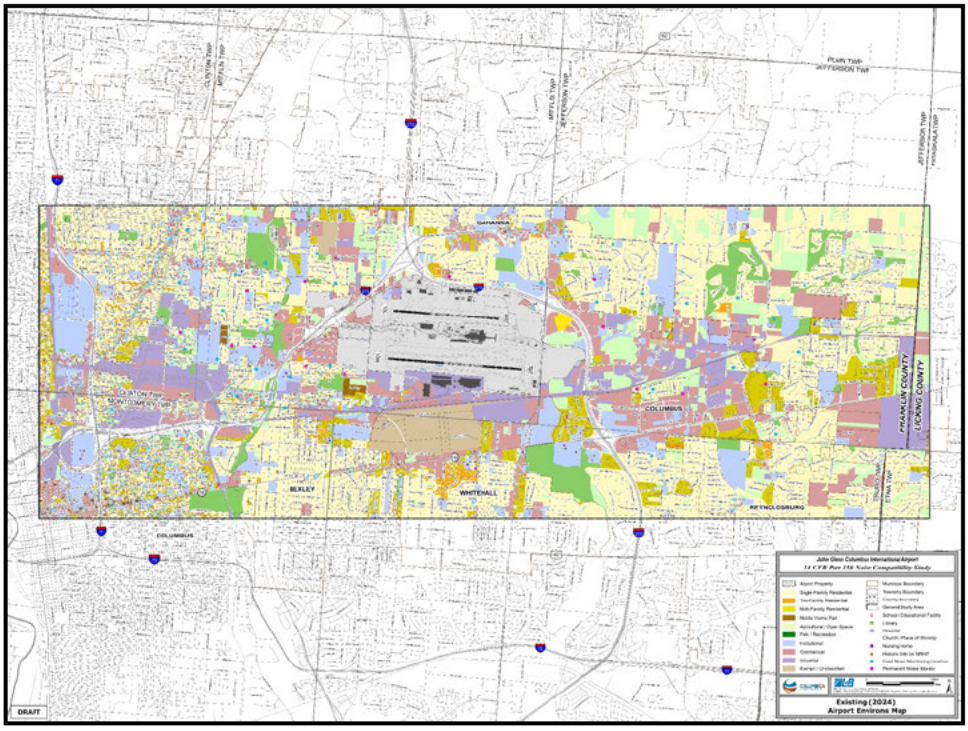
Aviation Environmental Design Tool (AEDT)



JOHN GLENN INTERNATIONAL

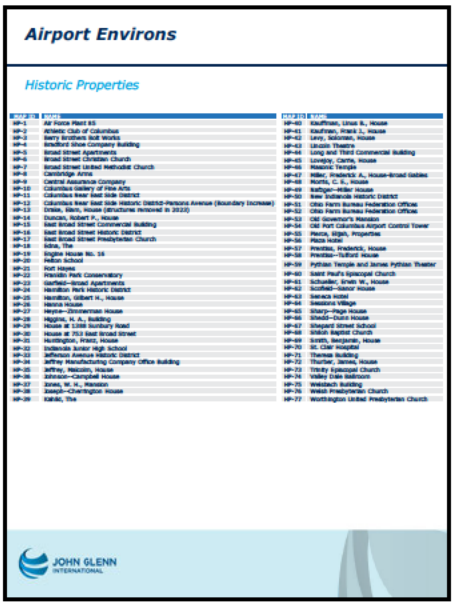
Comparison of Noise Levels




CLINTON TWP
MIFFLIN TWP
PLAIN TWP
JEFFERSON TWP
JEFFERSON TWP
FRANKLIN TWP
GAHANNA
CLAY TWP
MONTGOMERY TWP
COLUMBUS
FRANKLIN COUNTY
LICKING COUNTY
BERLIN TWP
ETNA TWP
BEXLEY
WHITEHALL
KEYCLOSBURG
COLUMBUS
John Glenn Columbus International Airport
14 CFR Part 150 Noise Compatibility Study
Existing (2024)
Airport Environs Map
DRAFT

Airport Environs
Noise Sensitive Public Facilities
JOHN GLENN INTERNATIONAL

Airport Environs
Noise Sensitive Public Facilities (Continued)
JOHN GLENN INTERNATIONAL


Airport Environs
Historic Properties
HP-1 Air Force Plant 85
HP-2 Athletic Club of Columbus
HP-3 Barry Brothers Ball Works
HP-4 Bradford Shoe Company Building
HP-5 Broad Street Apartments
HP-6 Broad Street Christian Church
HP-7 Broad Street United Methodist Church
HP-8 Cambridge Arms
HP-9 Central Assurance Company
HP-10 Columbus Gallery of Fine Arts
HP-11 Columbus Near East Side District
HP-12 Columbus Near East Side Historic District-Parsons Avenue (Boundary Increase)
HP-13 Drake, Elam, House (Structures removed in 2023)
HP-14 Duncan, Robert F., House
HP-15 East Broad Street Commercial Building
HP-16 East Broad Street Historic District
HP-17 East Broad Street Presbyterian Church
HP-18 Edna, The
HP-19 Engine House No. 16
HP-20 Felton School
HP-21 Fort Hayes
HP-22 Franklin Park Conservatory
HP-23 Garfield--Broad Apartments
HP-24 Hamilton Park Historic District
HP-25 Hamilton, Gilbert H., House
HP-26 Hanna House
HP-27 Heyne--Zimmerman House
HP-28 Higgins, H. A., Building
HP-29 House at 1288 Bunbury Road
HP-30 House at 753 East Broad Street
HP-31 Huntington, Frank, House
HP-32 Indianola Junior High School
HP-33 Jefferson Avenue Historic District
HP-34 Jeffrey Manufacturing Company Office Building
HP-35 Jeffrey, Malcolm, House
HP-36 Johnson--Campbell House
HP-37 Jones, W. H., Mansion
HP-38 Joseph--Charrington House
HP-39 Kiehl, The
HP-40 Kauffman, Linus B., House
HP-41 Kaufman, Frank J., House
HP-42 Levy, Solomon, House
HP-43 Lincoln Theatre
HP-44 Long and Third Commercial Building
HP-45 Lovejoy, Carrie, House
HP-46 Masonic Temple
HP-47 Miller, Frederick A., House--Broad Gables
HP-48 Morris, C. S., House
HP-49 Kathan--Miller House
HP-50 New Indianola Historic District
HP-51 Ohio Farm Bureau Federation Offices
HP-52 Ohio Farm Bureau Federation Offices
HP-53 Old Governor's Mansion
HP-54 Old Port Columbus Airport Control Tower
HP-55 Pierce, Elijah, Properties
HP-56 Plaza Hotel
HP-57 Prentiss, Frederick, House
HP-58 Prentiss--Telford House
HP-59 Pythian Temple and James Pythian Theater
HP-60 Saint Paul's Episcopal Church
HP-61 Schueller, Erwin W., House
HP-62 Scofield--Senior House
HP-63 Seneca Hotel
HP-64 Seneca Village
HP-65 Sharp--Page House
HP-66 Shedd--Dodd House
HP-67 Shepard Street School
HP-68 Shiloh Baptist Church
HP-69 Smith, Benjamin, House
HP-70 St. Clair Hospital
HP-71 Theresa Building
HP-72 Thurber, James, House
HP-73 Trinity Episcopal Church
HP-74 Valley Dale Ballroom
HP-75 Weisbach Building
HP-76 Welsh Presbyterian Church
HP-77 Worthington United Presbyterian Church
JOHN GLENN INTERNATIONAL

Existing (2024) Operating Levels

Aircraft Type	AADT ARP (Nov '23)	Arrivals Daytime	Arrivals Nighttime	Departures Daytime	Departures Nighttime
Large Jets					
Airbus A220-300	737700	0.4	0.0	0.4	0.0	0.8
Airbus A319-100 Series	A319-101	4.1	1.4	4.4	1.3	11.4
Airbus A320-200 Series	A320-211	4.3	1.3	5.8	0.8	12.2
Airbus A320-NEO	A320-C70N	1.1	0.4	1.0	0.3	2.8
Airbus A321-200 Series	A321-232	1.8	0.9	2.0	0.7	5.4
Airbus A321-NEO	A321-232	0.5	0.4	0.7	0.2	1.8
Boeing 717-200 Series	717200	0.8	0.2	0.9	0.2	2.1
Boeing 737-700 Series	737700	15	3.5	15	3.5	37
Boeing 737-8	737MAX	3.3	1.4	3.6	1.3	9.8
Boeing 737-800 Series	737800	10.9	4.5	12.6	2.8	30.8
Boeing 737-9	737MAX	0.4	0.1	0.3	0.0	1.0
Boeing 737-900 Series	737800	0.3	0.2	0.3	0.1	1.3
Boeing 737-900-ER	737800	4	1.4	4.3	1.1	10.8
Bombardier CRJ-700	CRJ9-ER	0.3	0.0	0.4	0.0	0.7
Bombardier CRJ-700-ER	CRJ9-ER	0.7	0.1	0.7	0.0	1.5
Bombardier CRJ-900	CRJ9-ER	5.0	0.9	4.7	0.9	11.3
Bombardier CRJ-900-ER	CRJ9-ER	0.4	0.0	0.4	0.1	0.9
Embraer ERJ170	EMB170	0.7	0.1	0.7	0.1	1.6
Embraer ERJ170-LR	EMB170	5.3	1.1	5.5	0.9	12.8
Embraer ERJ175	EMB175	1.4	0.3	1.7	0.3	3.8
Embraer ERJ175-LR	EMB175	16.8	4.1	20.1	4.9	46.1
Embraer ERJ190	EMB190	0.3	0.0	0.2	0.0	0.6
Embraer ERJ195	EMB195	0.9	0.0	0.4	0.0	0.9
Subtotal		80.9	22.4	94.6	19.7	226.6
General Aviation / Commuter Props						
Cessna 172 Skyhawk	CNA172	0.6	0.0	0.6	0.1	1.2
Cessna 182	CNA182	0.3	0.0	0.3	0.0	0.6
Cessna 206	CNA207	0.1	0.0	0.1	0.0	0.2
Cessna 208 Caravan	CNA208	0.1	0.0	0.1	0.0	0.2
Cessna 210 Centurion	CNA210	0.1	0.0	0.1	0.0	0.2
Cessna 310	C310	0.1	0.0	0.1	0.0	0.2
Cessna 340	E340	0.1	0.0	0.1	0.0	0.2
Cessna 414	E340	0.1	0.0	0.1	0.0	0.2
Cessna 441 Conquest II	CNA441	0.3	0.0	0.3	0.0	0.6
Cirrus SR22	C22SF	1.2	0.1	1.2	0.1	2.6
Cirrus Vision SF50 (VAS)	CNA510	0.4	0.0	0.4	0.0	0.8
MAIA Scout TBM-700	CNA700	0.2	0.0	0.2	0.0	0.4
Lancair Evolution (VAS)	GASEPV	0.2	0.0	0.2	0.0	0.4
Mooney M20 K	GASEPV	0.1	0.0	0.1	0.0	0.2
Piaggio P.180 Avanti	DHC8	0.1	0.0	0.1	0.0	0.2
Pilatus PC-12	CNA208	0.9	0.0	0.9	0.1	1.9
Pilatus PC-24	CNA510	0.2	0.0	0.2	0.0	0.4
Piper PA-24 Comanche	GASEPV	0.1	0.0	0.1	0.0	0.2
Piper PA-28 Cherokee Series	GASEPF	0.6	0.1	0.6	0.1	1.2
Piper PA-32 Twin Comanche	PA30	0.1	0.0	0.1	0.0	0.2
Piper PA-34 Seneca	PA34	0.1	0.0	0.1	0.0	0.2
Piper PA-46 Malibu/Mirage	PA46	0.1	0.0	0.1	0.0	0.2
Piper PA-60 Aerostar	PA60	0.1	0.0	0.1	0.0	0.2
Raytheon Beech Baron 58	BE58P	0.1	0.0	0.1	0.0	0.2
Raytheon Beech Bonanza 36	GASEPV	0.3	0.0	0.3	0.0	0.6
Raytheon King Air 100	DHC8	0.1	0.0	0.1	0.0	0.2
Raytheon King Air 90	DHC8	0.1	0.0	0.1	0.0	0.2
Raytheon Super King Air 200	DHC8	0.3	0.0	0.3	0.0	0.6
Raytheon Super King Air 300	DHC8	0.3	0.0	0.3	0.0	0.6
Subtotal		7.0	0.4	6.9	0.5	14.8

Aircraft Type	AADT ARP (Nov '23)	Arrivals Daytime	Arrivals Nighttime	Departures Daytime	Departures Nighttime	Total
Regional / Air Taxi Jets						
Bombardier CRJ-100	CL600	1.7	0.1	1.6	0.2	3.6
Bombardier CRJ-100-ER	CL600	12.7	0.8	11.7	1.8	27.0
Embraer ERJ135	EMB140	0.2	0.0	0.2	0.0	0.4
Embraer ERJ145	EMB140	1.9	0.0	1.9	0.0	3.8
Embraer ERJ145-ER	EMB140	9.9	0.7	9.9	0.7	19.3
Subtotal		22.4	1.6	21.3	2.7	48
General Aviation Jets						
Bombardier Challenger 300	CL600	2.0	0.1	2.0	0.1	4.3
Bombardier Challenger 600	CL600	0.9	0.1	0.9	0.1	2.0
Bombardier Global 8000	BD-700-1A11	0.3	0.0	0.3	0.0	0.6
Bombardier Global Express	BD-700-1A10	0.4	0.0	0.4	0.0	0.8
Bombardier Learjet 31	LJ45XR	0.2	0.0	0.2	0.0	0.4
Bombardier Learjet 35	LJ45XR	0.7	0.0	0.7	0.0	1.4
Bombardier Learjet 45	LJ45XR	0.4	0.1	0.4	0.1	1.0
Cessna 501 Citation SP	CNA500	0.1	0.0	0.1	0.0	0.2
Cessna 560 Citation II	CNA550	0.9	0.0	0.9	0.0	1.8
Cessna 560 Citation V	CNA560U	0.6	0.0	0.6	0.0	1.2
Cessna 560 Citation XLS	CNA560XL	0.4	0.0	0.4	0.0	0.8
Cessna 650 Citation III	C3TS	0.1	0.0	0.1	0.0	0.2
Cessna 680 Citation Sovereign	CNA680	0.9	0.0	0.9	0.0	1.8
Cessna 680-A Citation Latitude	CNA680	0.1	0.0	0.1	0.0	0.2
Cessna 700 Citation Longitude	CNA680	0.9	0.1	0.8	0.1	1.4
Cessna 750 Citation X	CNA750	0.1	0.0	0.1	0.0	0.2
CESSNA CITATION X10	CNA510	0.1	0.0	0.1	0.0	0.2
Cessna CitationJet C22 (Cessna 525A)	CNA525C	0.7	0.1	0.7	0.1	1.6
Cessna CitationJet C23 (Cessna 525B)	CNA525C	0.9	0.1	0.9	0.1	2
Cessna CitationJet C24 (Cessna 525C)	CNA525C	0.8	0.1	0.8	0.1	1.8
Dassault Falcon 200	FAL20	0.3	0.0	0.3	0.0	1.0
Dassault Falcon 50	FAL50EX	0.7	0.1	0.7	0.1	1.6
Dassault Falcon 900	FAL900EX	0.2	0.0	0.2	0.0	0.4
Eclipse 500 / PW610F	ECLIPSE500	0.1	0.0	0.1	0.0	0.2
Embraer Legacy 500 (EMB-550)	CNA55B	0.1	0.0	0.1	0.0	0.2
Embraer Legacy 600	EMB145	0.2	0.0	0.2	0.0	0.4
Embraer Phenom 100 (EMB-500)	CNA510	0.2	0.0	0.2	0.0	0.4
Embraer Phenom 300 (EMB-505)	CNA55B	0.6	0.0	0.6	0.0	1.2
Falcon 7X	G5V	0.1	0.0	0.1	0.0	0.2
Gulfstream Aerospace Gulfstream G500 (G-7)	G5V	0.1	0.0	0.1	0.0	0.2
Gulfstream G150	IA1125	0.0	0.0	0.0	0.0	0.0
Gulfstream G280	CL601	0.2	0.0	0.2	0.0	0.4
Gulfstream G450	GIV	0.3	0.0	0.3	0.0	0.6
Gulfstream G650	G650ER	0.1	0.0	0.1	0.0	0.2
Gulfstream V-SP	G5V	0.0	0.0	0.0	0.0	0
Gulfstream V-SP	G5V	0.1	0.0	0.1	0.0	0.2
Honda HA-420 HondaJet	CNA510	0.2	0.0	0.2	0.0	0.4
Raytheon Hawker 4000 Horizon	CNA750	0.2	0.0	0.2	0.0	0.4
Raytheon Hawker 800	LJ45XR	0.6	0.1	0.6	0.1	1.4
Raytheon Premier I	CNA55B	0.1	0.0	0.1	0.0	0.2
Subtotal		11.6	1.0	11.5	1.0	25
Grand Total		**135.8**	**36.4**	**136.3**	**23.8**	**334.4**

Notes: Total may not equal sum total due to rounding.
Daytime = 7:00am – 9:59pm, Nighttime = 10:00pm – 6:59am.

Source: Federal Aviation Administration (FAA) Operations Network (OpsNet) data, CRAA Landing Fee Reports, CMH ANOMS data, Landrum & Brown analysis, 2024

JOHN GLENN INTERNATIONAL

Future (2029) Baseline Operating Levels

Aircraft Type	AADT ARP (Nov '23)	Arrivals Daytime	Arrivals Nighttime	Departures Daytime	Departures Nighttime	Total
Large Passenger Jets						
Airbus A220-300	737700	1.1	0.1	1.1	0.1	2.4
Airbus A319-100 Series	A319-101	3.2	1.2	3.4	1.0	8.8
Airbus A320-200 Series	A320-211	8.4	2.8	7.2	1.0	19.4
Airbus A320-NEO	A320-C70N	2.6	0.9	2.4	1.1	7.0
Airbus A321-200 Series	A321-232	1.4	0.7	1.8	0.4	4.2
Airbus A321-NEO	A321-232	1.7	1.0	2.0	0.7	5.4
Boeing 717-200 Series	717200	1.1	0.3	1.1	0.3	2.8
Boeing 737-7	737MAX	8.4	4.1	9.2	3.3	25
Boeing 737-700 Series	737700	9.8	2.3	9.8	2.3	24.2
Boeing 737-8	737MAX	9.7	4	11.1	2.6	27.4
Boeing 737-800 Series	737800	8.8	3.6	10.2	2.2	24.8
Boeing 737-9	737MAX	1.1	0.4	1.2	0.3	3
Boeing 737-900-ER	737800	4.7	1.7	4.7	1.7	12.8
Bombardier CRJ-700-ER	CRJ9-ER	1.0	0.1	1.1	0.0	2.2
Bombardier CRJ-900	CRJ9-ER	5.3	0.7	5.0	1.0	12
Bombardier CRJ-900-ER	CRJ9-ER	0.4	0.0	0.4	0.0	0.8
Embraer ERJ170	EMB170	3.1	0.6	3.2	0.5	7.4
Embraer ERJ170-LR	EMB170	33.8	4.7	33.8	3.9	80.4
Embraer ERJ175	EMB175	10.4	1.9	10.1	1.8	23.8
Embraer ERJ175-LR	EMB175	1.9	0.1	1.8	0.1	3.2
Embraer ERJ190	EMB190	0.9	0.0	0.9	0.0	1.0
Subtotal		104.2	31.3	111	24.8	271
Regional / Air Taxi Jets						
Bombardier CRJ-200	CL600	1.6	0.1	1.6	0.2	3.4
Bombardier CRJ-200-LR	CL600	9.9	0.8	9.9	0.2	19.3
Embraer ERJ135	EMB140	0.1	0.0	0.1	0.0	0.2
Embraer ERJ145	EMB140	0.9	0.1	0.9	0.0	1.8
Embraer ERJ145-LR	EMB145	0.1	0.0	0.1	0.0	0.2
Embraer ERJ145-XR	EMB145	2.5	0.3	2.6	0.4	6.0
Subtotal		11.8	1.4	11.7	0.8	24.8
General Aviation Props						
Cessna 172 Skyhawk	CNA172	0.5	0.0	0.5	0.0	1.0
Cessna 182	CNA182	0.3	0.0	0.3	0.0	0.6
Cessna 206	CNA207	0.1	0.0	0.1	0.0	0.2
Cessna 208 Caravan	CNA208	0.4	0.0	0.4	0.0	0.8
Cessna 310	E340	0.2	0.0	0.2	0.0	0.4
Cessna 441 Conquest II	CNA441	0.2	0.0	0.2	0.0	0.4
Cirrus SR22	C22SF	1.0	0.1	1.0	0.1	2.2
MAIA Scout TBM-700	CNA350	0.4	0.0	0.3	0.1	0.8
Piaggio P.180 Avanti	DHC8	0.2	0.1	0.2	0.1	0.6
Pilatus PC-12	CNA208	1.5	0.1	1.4	0.2	3.2
Piper PA-28 Cherokee Series	GASEPF	0.5	0.1	0.5	0.1	1.2
Piper PA-32 Twin Comanche	PA30	0.1	0.0	0.1	0.0	0.2
Piper PA-34 Seneca	E340	0.1	0.0	0.1	0.0	0.2
Piper PA-46 Malibu/Mirage	PA46	0.5	0.0	0.5	0.0	1.0
Raytheon Beech Baron 58	BE58P	0.1	0.0	0.1	0.0	0.2
Raytheon Beech Bonanza 36	GASEPV	1.3	0.3	1.4	0.0	3.2
Raytheon King Air 100	DHC8	0.1	0.0	0.1	0.0	0.2
Raytheon King Air 90	DHC8	0.1	0.0	0.1	0.0	0.2
Raytheon Super King Air 200	DHC8	0.3	0.0	0.3	0.0	0.6
Raytheon Super King Air 300	DHC8	1.0	0.1	1.0	0.1	2.2
Subtotal		9.9	0.8	10	0.7	21.4

Aircraft Type	AADT ARP (Nov '23)	Arrivals Daytime	Arrivals Nighttime	Departures Daytime	Departures Nighttime	Total
General Aviation Jet						
Bombardier Challenger 300	CL600	4.8	0.2	4.9	0.3	10.2
Bombardier Challenger 350	CL600	1.8	0.1	1.8	0.1	3.8
Bombardier Challenger 600	CL600	1.7	0.1	1.6	0.2	3.6
Bombardier Global 8000	BD-700-1A11	0.2	0.0	0.2	0.0	0.4
Bombardier Global Express	BD-700-1A10	0.3	0.0	0.3	0.1	0.7
Bombardier Learjet 31	LJ45XR	0.1	0.1	0.1	0.1	0.4
Bombardier Learjet 35	LJ45XR	0.1	0.1	0.1	0.1	0.4
Bombardier Learjet 45	LJ45XR	0.3	0.1	0.3	0.1	0.8
Bombardier Learjet 60	LJ45XR	0.2	0.1	0.2	0.1	0.6
Cessna 501 Citation SP	CNA500	0.0	0.0	0.0	0.0	0.0
Cessna 550 Citation II	CNA550	1.0	0.0	1.0	0.0	2.0
Cessna 560 Citation V	CNA560U	1.0	0.0	1.0	0.0	2.0
Cessna 560 Citation XLS	CNA560XL	0.7	0.0	0.6	0.0	1.4
Cessna 650 Citation III	C3TS	0.1	0.0	0.1	0.0	0.2
Cessna 680 Citation Sovereign	CNA680	1.6	0.1	1.6	0.1	3.2
Cessna 680-A Citation Latitude	CNA680	1.7	0.1	1.7	0.1	3.2
Cessna 700 Citation Longitude	CNA680	1.1	0.1	1.1	0.1	2.4
Cessna 750 Citation X	CNA750	0	0	0.1	0.0	0.2
CESSNA CITATION X10	CNA510	0.1	0	0.1	0.0	0.2
Cessna CitationJet C22 (Cessna 525A)	CNA525C	1.9	0.1	1.4	0.2	3.2
Cessna CitationJet C23 (Cessna 525B)	CNA525C	0.8	0.1	0.6	0.1	1.4
Cessna CitationJet C24 (Cessna 525C)	CNA525C	0.0	0.0	0.0	0.0	1.0
Dassault Falcon 200	FAL20	0.6	0.0	0.7	0.1	1.4
Dassault Falcon 50	FAL50EX	1.2	0.2	1.2	0.2	2.8
Dassault Falcon 900	FAL900EX	0.4	0	0.4	0.0	0.8
Eclipse 500 / PW610F	ECLIPSE500	0.1	0	0.1	0.0	0.2
Embraer Legacy 500 (EMB-550)	CNA55B	0.1	0	0.1	0.0	0.2
Embraer Legacy 600	EMB145	0.4	0.1	0.5	0.0	1.0
Embraer Phenom 100 (EMB-500)	CNA510	0.1	0	0.1	0.0	0.2
Embraer Phenom 300 (EMB-505)	CNA55B	3.4	0.3	3.3	0.4	7.4
Falcon 7X	G5V	0.2	0	0.2	0.0	0.4
Gulfstream Aerospace Gulfstream G500 (G-7)	G5V	0.1	0.0	0.1	0.0	0.2
Gulfstream G150	IA1125	0.1	0.0	0.1	0.0	0.2
Gulfstream G280	CL601	0.2	0.0	0.2	0.0	0.4
Gulfstream G450	GIV	0.2	0.0	0.2	0.0	0.4
Gulfstream G650	G650ER	0.1	0.0	0.1	0.0	0.2
Gulfstream V-SP	G5V	0.4	0.0	0.4	0.0	0.8
Gulfstream V-SP	G5V	0.2	0.0	0.2	0.0	0.4
Honda HA-420 HondaJet	CNA510	0.1	0.0	0.1	0.0	0.2
Raytheon Hawker 4000 Horizon	CNA750	1.0	0.1	1.0	0.1	2.2
Raytheon Hawker 800	LJ45XR	0.8	0.1	0.9	0.1	2.0
Raytheon Premier I	CNA55B	0.1	0.0	0.1	0.0	0.2
Subtotal		34.2	3.9	33.6	3.1	75.4
Grand Total		**190.3**	**36**	**186.3**	**29.1**	**365.7**

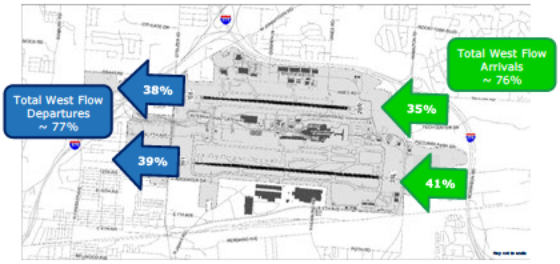
Notes: Total may not equal sum total due to rounding.
Daytime = 7:00am – 9:59pm, Nighttime = 10:00pm – 6:59am.

Source: Federal Aviation Administration (FAA) Draft Terminal Area Forecast, July 2023; Landrum & Brown analysis, 2024.

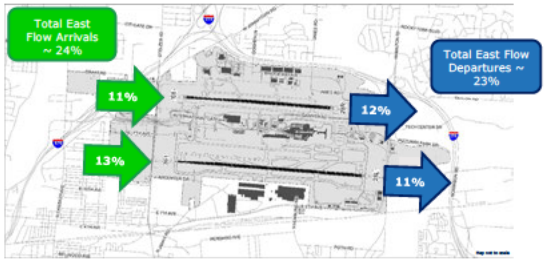
JOHN GLENN INTERNATIONAL

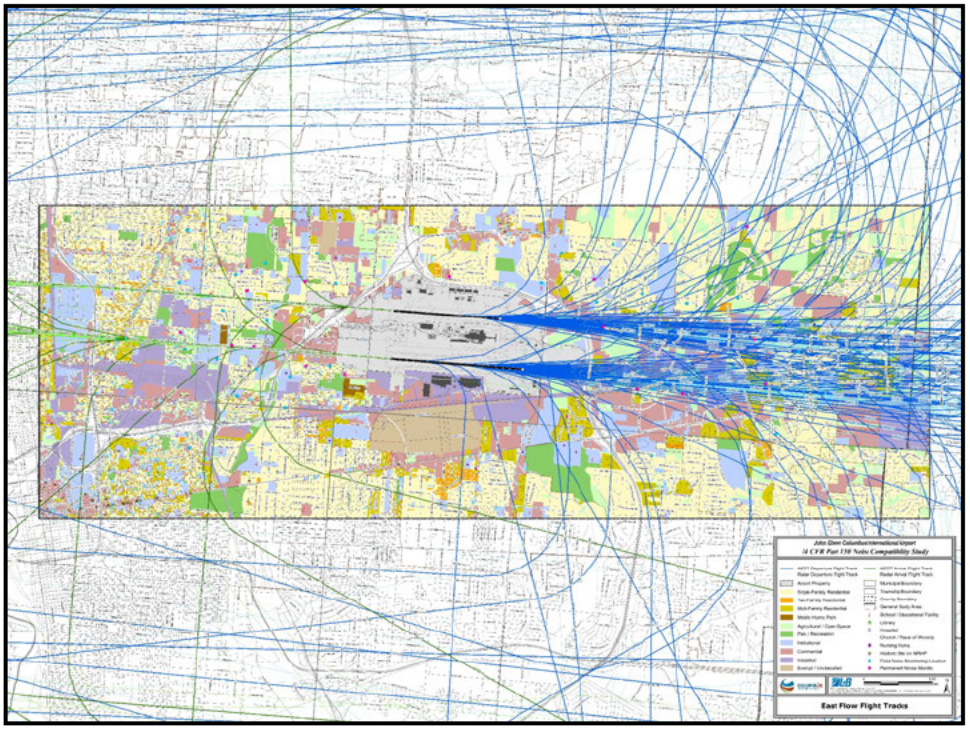
CMH Airport Operational Flow

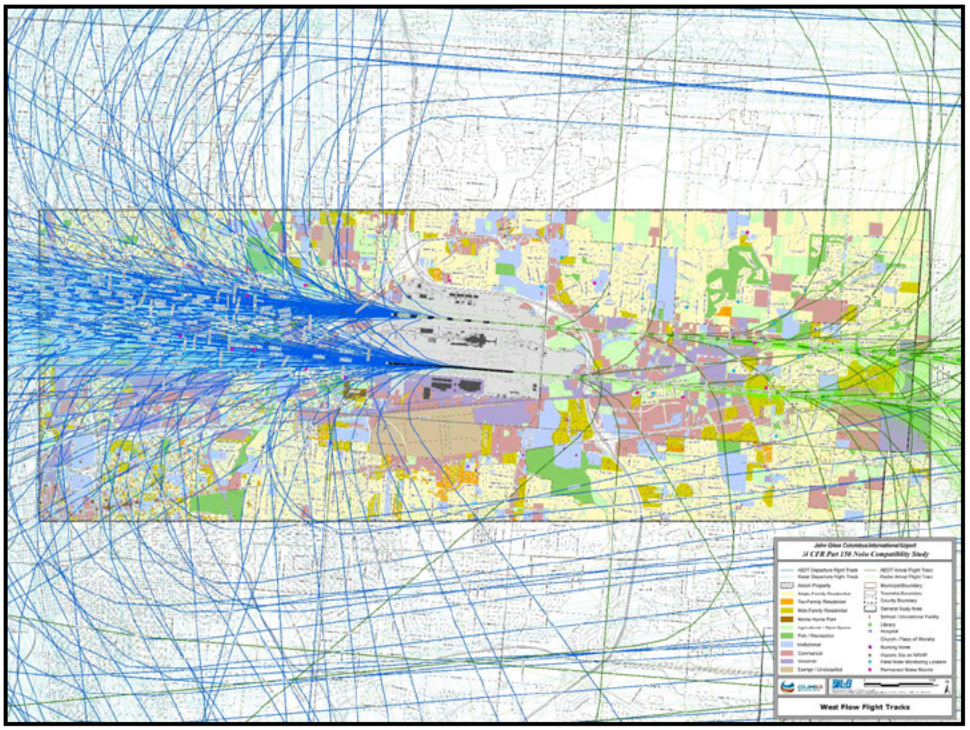
Runway Use – West Flow

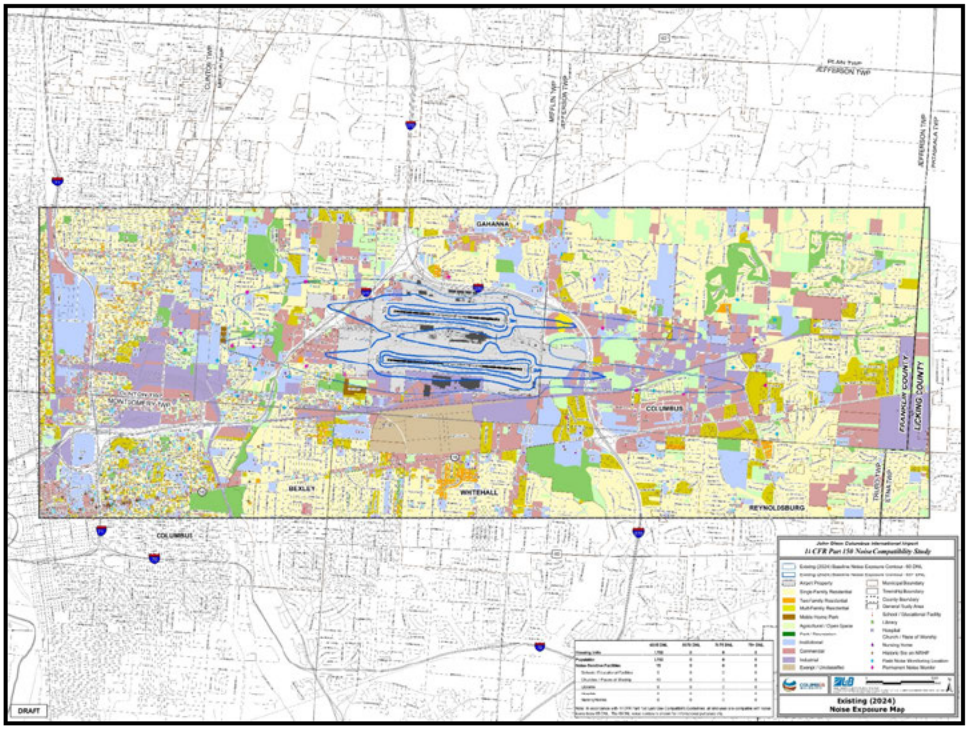


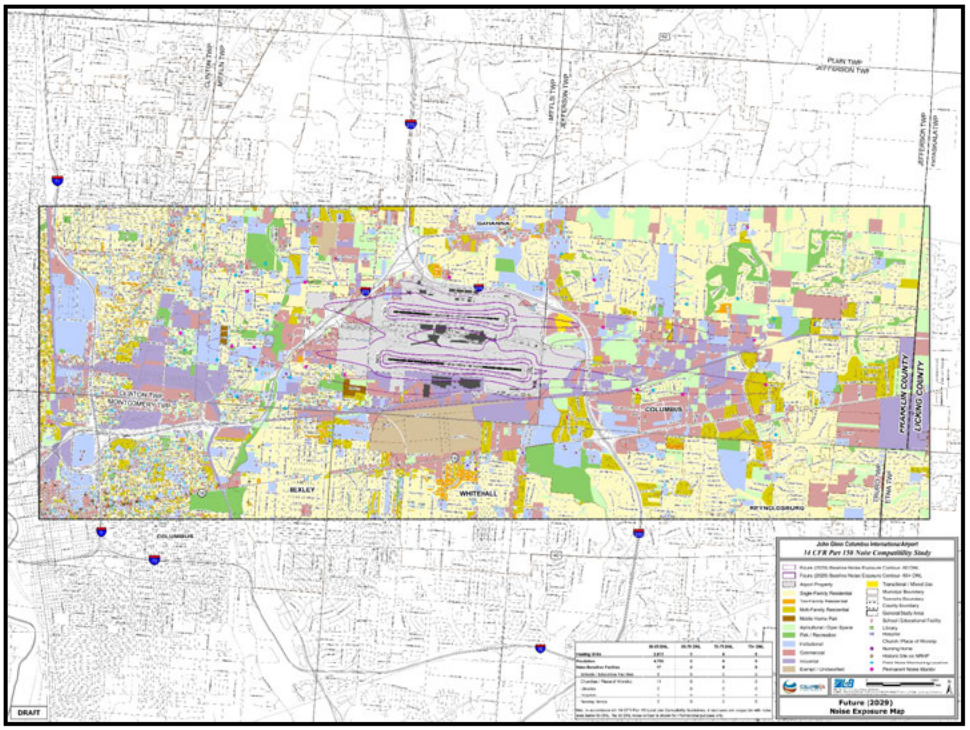
Runway Use – East Flow




John Glenn Columbus International Airport
14 CFR Part 150 Noise Compatibility Study
East Flow Flight Tracks


John Glenn Columbus International Airport
14 CFR Part 150 Noise Compatibility Study
West Flow Flight Tracks


GAHANNA
COLUMBUS
BEXLEY
WHITEHALL
REYNOLDSBURG
FRANKLIN COUNTY
LICKING COUNTY
DRAFT
Existing (2024)
Noise Exposure Map


GAHANNA
COLUMBUS
BEXLEY
WHITEHALL
REYNOLDSBURG
FRANKLIN COUNTY
LICKING COUNTY
DRAFT
Future (2029)
Noise Exposure Map

Noise Compatibility Measures

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Noise Abatement Measures					
NA-1: Amend the CMH Nighttime Aircraft Maintenance Run-Up Policy to designate an additional run-up location at the Natatia facility. This measure will provide alternate facility. This measure will provide alternate jet engine maintenance run-ups for adjacent residential areas located north of the Airport.	CMA	None	None	None	Implemented – Run-ups are performed at the Natatia facility.
NA-2: Construct a new run-up barrier at the north airfield, if the Natatia building does not adequately attenuate jet engine maintenance run-up noise for adjacent residential areas located north of the Airport.	CMA	None	None	None	Implemented – A run-up barrier is used at the Natatia 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 Use of NAVAIDS dictate otherwise, between the hours of 10:00 p.m. and 6:00 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.	CMA, 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 10:30pm and 6:30am.
NA-4: Maximize east flow and amend FAA Tower order CMH ATCT 7110.1L and the Airport Facilities Directory to reflect implementation of the "east flow" informal preferential runway use system.	CMA, 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 290-degree heading, only during peak operating periods when traffic warrants.	CMA, 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/OPD/CCDA)	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.
NA-8: Construct a noise berm/wall – Withdrew Measure	CMA	None	None	None	Not Implemented – This measure was considered for the acquisition area along Reed 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 8 (location/materials/size).	CMA (If the need for an upgraded barrier arises)	None	None	None	Not Implemented – Potential replacement and relocation of the Ground Run-Up Barrier 8 was proposed to accommodate larger aircraft associated with potential new maintenance hangars proposed for the southeast airfield. However, the proposed maintenance hangars were not constructed. Therefore, an upgrade to Barrier 8 was not pursued.
Land Use 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.	CMA (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.	CMA (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 2012 Part 150 Noise Compatibility Study. The CMA purchased an avigation easement on the property and it is now considered a compatible land use. One other church, the Mount Jude 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.

Noise Compatibility Measures

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Land Use Measures (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 CMA	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 CMA	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 CMA	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.
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 offset zoning regulations.	Jefferson Township, City of Gahanna, and CMA	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 CMA	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 CMA	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 CMA makes the noise exposure maps and other noise compatibility information available on its website.
LU-10: Periodically place advertisements in a variety of media outlets delineating the boundaries of the Airport Land Use Management District (ALUMD).	CMA	Approximately $10,000 annually	None	None	Not implemented – The ALUMD has not been adopted. The CMA 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 CMA	Approximately $10,000 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, Franklin County continue to apply an Airport Environs Overlay, the boundaries of which continue to be the noise exposure contour from the previous Part 150 Noise Compatibility Study Update which is subject to periodic review and potential revision.
Program Management Measures					
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	CMA	Cost for staff time	None	None	Ongoing – The CMA 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	CMA	Minimal cost for staff time	None	None	Ongoing – The CMA maintains public involvement activities, including the 24-hour noise hotline, WebTrak tracking system, and noise monitoring system.
PM-4: Maintain the noise and flight track monitoring system and expand and upgrade the system as necessary.	CMA	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 CMA 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	CMA, FAA	NEMs ($300,000) NEMs and NCP ($1,500,000)	None	None	Ongoing – this 2024 NCP update represents the continuation of this measure. CMA 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	CMA	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.

Public Hearing Protocol

- The purpose of the hearing is to give all interested people the opportunity to put their comments and questions on the record, regarding this Draft Noise Exposure Map (NEM) Update and Noise Compatibility Program (NCP).
- People wishing to make comments can do so by writing their comments on a form provided, submitting an email to the address listed on the form, or by making an oral statement to the court reporter at tonight's hearing.
- People wanting to have their comments transcribed by the court reporter must register at the sign-in table. Please be courteous and respect the rights of all commenters.
- Each commenter will be allotted up to **3** minutes with the court reporter. Commenters may not transfer their time for another to person use.
- People desiring more time may register to speak again with the court reporter. They will be given another opportunity to speak after all other registered commenters have had their chance.
- You may submit written comments on the NEM Update tonight or before the end of the of the comment period. All written comments must be postmarked, or e-mailed to the address indicated on the comment forms by February 14, 2025.
- A copy of the court reporter's transcript, including all oral and written comments and responses, will be included in the Final Part 150 Update Document.

JOHN GLENN INTERNATIONAL

Next Steps

- **February/March 2025**
  - Review and address public comments
- **Spring 2025**
  - Prepare Final Part 150 Noise Compatibility Program (NCP) Update Report
  - Submit Final NCP Update to FAA for review/approval
- **Summer/Fall 2025**
  - Anticipate FAA Record of Approval

JOHN GLENN INTERNATIONAL

January 2025 Public Hearing Comments

This page intentionally left blank

From: AJ Rogish
To: L&B | CMH-P150
Cc: Tracy Drew; Scott Wise; Matthew Satterwhite
Subject: FW: Consideration
Date: Wednesday, February 12, 2025 12:35:40 PM
Attachments: image001.png
DOC040.pdf

You don't often get email from arogish@jeffersoncountryclub.com. Learn why this is important

Dear Mr. Sandfoss,

Please find attached the joint concerns of the Jefferson Meadows Property Owners Association and the Jefferson Country Club related to the noise study for the CMH airport authority.

We have a serious concern but have also provided a remedy we believe will address that concern and allow matters to move forward.

Sincerely,

Scott Wise (Jefferson Meadows)

AJ Rogish
General Manager
Jefferson Country Club
614-759-7500 ext. 220
Arogish@jeffersoncountryclub.com
Like us on Facebook!

Joint Comments on Behalf of the Jefferson Meadows Property Owners Association
and the Jefferson Country Club

Date: February 12, 2025

To: Chris Sandfoss, 4445 Lake Forest Dr, Suite 700, Cincinnati, OH 45242 (submitted via email to CMHPart150@landrumbrown.com)

From: **Scott Wise, President, Jefferson Meadows Property Owners Association**
AJ Rogish, General Manager, Jefferson Country Club

Located (between Havens Corner and Taylor Road (north/south) and Reynoldsburg/New Albany and Taylor Station (east/west))

RE: Comments of concern and Request for the CMH 14 CFR Part 150 Noise Study

Greetings,

This is a joint letter on behalf of the Jefferson Meadows Property Owners Association and the Jefferson Country Club, located in Jefferson Township. We submit these comments in our capacity as representatives of the Jefferson Meadows HOA that includes 255 homeowners to the northeast of the airport, and Jefferson Country Club (a privately held business) with a 720-membership count and a private golf course that weaves through housing development. The area is within the General Study Area highlighted in the Columbus, Ohio Airport (CMH) Noise Report.

Our two entities file this letter jointly as representatives of these interested groups that are directly impacted by the noise from air traffic over our homes and business. We have many members concerned about this subject and think a coordinated approach sharing our joint concerns together would be more efficient for the process. But please understand there is a large contingent with these concerns. We apologize for the timing of our concerns near the end of the process, but this is the first time our groups have been aware of the report and have an opportunity to comment. 4.5

We seek appropriate accommodation in the Noise Compatibility Study Update underway for the CMH study. The noise above our community has increased significantly in recent years and it is our belief that the report has gaps in the data collected in the report does not accurately reflect the noise impact on our neighborhood and private club. We respectfully request that the report include certain remediations to address those concerns. 1.1 1.6

Areas of Concern:

1. **Improper Designation of Land Use:** The study maps incorrectly designate the housing development and country club as park/recreation land. This area is a private country club with adjacent houses, not a community park. The 2.1

classification as recreation land does not consider the impact on home values, health of residents, and impact on the private country club. Likewise, there was no effort to include the association or club in any official direct notice of the study or process as part of the public outreach for the report. 2.2 4.5

2. **Inaccurate Flight Path Representation:**

At the outset, it was the HOA and Club's understanding that no flight paths would take a route over the golf course or community. In prior years, this matter was discussed with airport officials and there was an understanding that no flights would approach or cross over Taylor Road south of the country club area. However, Exhibits C-10 and 11 show that this is not the case, and flights are taking off and passing in the noise impacted area over the club and adjacent homes. 3.2

Another concern is that Exhibit C-10 and C-11 fail to accurately represent the current flight paths over our area and to adequately capture the volume on these paths. Over the past year alone, the landing and takeoff patterns have changed and the frequency of flights over our impacted area has increased significantly. 3.1

As mentioned above, there was previous interaction with the airport authority to address the noise impact. As a result of that interaction, it was our understanding that flights were not supposed to cross north over Taylor Road on ingress or egress above the community. Yet, more flights have moved north of Taylor Road in the past year, raising further concerns. The planes are so close that members of the community can attest to being able to read the letters on the underside of the passing airplanes as they see and hear them go above. 3.2 1.7

The flight patterns captured on Exhibit C-10 and C-11 appear to underrepresent that number of flights. There is a concern with the timing of the study. The representative at the public meeting indicated that these patterns represent 2022-2023 data. The flights appear to have increased even since that period, increasing the volume and cumulative impact of paths crossing this area. 3.1

3. **Inadequate Noise Measurement:**

The sound measurements taken to support the impacts in the study area are outdated and do not represent the current flight paths or volume.

According to the report and conversations with the study representative at the January 30th public meeting, the noise measurements were taken to understand the impact as part of the process, but Covid impacted the timing. The only noise information gathered in the club and HOA area was a short-term test done in 1.2

2019, in the neighborhood and adjacent to the club course. That short term testing does not correspond to the volume of flights, or the flight patterns measured on Exhibits C10 and 11, which were measured in 2022 and 2023. Therefore, any conclusions drawn from the data, including maps that correlate both the flight paths and sound testing locations together, are misleading. The data presented does not represent an accurate representation of the noise experienced compared to the actual current flight patterns or volume. 1.2

The short-term field noise measurement for this community and country club is inadequate. The loudest event recorded was 63.9 dB at Poppy Hills Drive & Keystone Ranch Court (short term monitor S-17), before some flight patterns moved directly over the area.

Again, in the past year (2024) residents have noticed even more planes taking a route directly over the Jefferson Meadows housing community and the Jefferson Country Club, further increasing the noise in this area. The 2018 short term sound study is an inadequate measurement for the current conditions facing this community and private business.

Future expected traffic will only serve to increase this traffic and raise the noise. The 2019 data (that already showed a 63.9 dB noise level) does not accurately represent the current conditions and presents a mischaracterization that requires remediation to address. 1.8

The current 14 CFR Part 150 Study is faulty due to the unfortunate delays caused by Covid. We as community members understand how unforeseen circumstances can impact this type of report. But those delays in the process cannot excuse the removal of a proper process and remediation for the homeowners and businesses in the Jefferson Club Community. Action must be taken to deal with this gap in the data included in the report. Therefore, our entities are joining together to provide a solution to our concern so that the work can continue. 4.3

Requested Noise Compatibility Program Measure:

Our groups appreciate the investment in the area and the growth of the region. We understand that there is an airport on this side of town and are not opposing the airport in general. However, there are studies and processes like this report to ensure that it is done responsibly, and the appropriate accommodation can be made in planning. We approach this with good faith and provide a solution we believe will accommodate all interests.

Joint Comments on Behalf of the Jefferson Meadows Property Owners Association
and the Jefferson Country Club

We request that the report recommend our outlined Noise Compatibility Program Measure as a noise remediation. Specifically, we ask that the report recommend to the FAA that flights stay south of Taylor Road, when in the landing and take-off process, thereby avoiding the Jefferson Club Community. The turn north upon takeoff over the Jefferson Club Community (as seen in Exhibits C-10 and 11) must stop, and that traffic turned at higher levels out of the noise impacted zone, further away from the airport where the noise can be further addressed with level and distance.

3.2 & 5.1

This recommendation refers to the process outlined in the report as "straight out departures." The Airport Authority's advocacy for straight out takeoff and straight in landing patterns within the Taylor Road corridor, avoiding the country club and homes in the HOA as a noise remedy. The Jefferson Meadows HOA and Jefferson Country Club request recommending this noise limit as a Noise Compatibility Program Measure in the report.

We thank you for your time and attention to this concern. Please contact our groups if more information is required or if there are any other actions that can be taken to address this matter.

Thank you,

Scott Wise
President, Jefferson Meadows Property Association
614-353-3083
Wiseone825@outlook.com

AJ Rogish
General Manager, Jefferson Country Club
614-759-7500
arogish@jeffersoncountryclub.com

From: Kelly Kiener
To: L&B | CMH-P150
Cc: Dion Grener
Subject: Public comment on behalf of the Jefferson Township Board of Trustees
Date: Wednesday, February 12, 2025 12:01:41 PM
Attachments: 20250212 LTR re Airport Noise Compatability - Jefferson Township.pdf

---

You don't often get email from kkiener@jeffersontownship.org. Learn why this is important

Good afternoon -

Please see the attached letter on behalf of the Jefferson Township Board of Trustees. If you have any questions, please feel free to reach out.

Best,
Kelly

Kelly Kiener
Jefferson Township | Asst. Township Administrator
(614) 304-0133 | kkiener@jeffersontownship.org
6545 Havens Road | Blacklick, OH 43004

jeffersontownship.org
facebook.com/jeffersontownshipohio

The information contained in this message may be privileged and confidential and protected from disclosure. If the reader of this message is not the intended recipient, or an employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by replying to the message and deleting it from your computer. Thank you.

Jefferson Township

Jefferson Township Board of Trustees
6545 Havens Road
Blacklick, Ohio 43004

February 12, 2025

Columbus Regional Airport Authority
John Glenn Columbus International Airport
4600 International Gateway
Columbus, OH 43219

Subject: Public Comment on the Part 150 Noise Compatibility Study Update

To Whom It May Concern,

On behalf of the Jefferson Township Board of Trustees, we are submitting the following comments regarding the ongoing Part 150 Noise Compatibility Study Update for John Glenn Columbus International Airport.

Recent increases in air traffic and changes in flight patterns – specifically earlier turns after takeoff – have raised significant concerns among Jefferson Township residents. Homeowners in the Jefferson Meadows subdivision, in particular, have reported an increase in noise disturbances and are concerned about the expansion of the 60-65 Day-Night Average Sound Level (DNL) noise contours. With the study anticipating a 20% increase in air traffic by 2029 and eastbound takeoffs being the airport's preferred direction, prioritizing air traffic over and in the vicinity of Jefferson Township, these concerns are particularly relevant to our community. 1.1 3.3

The following issues merit further consideration:

1. **Potential Expansion of the 60-65 DNL Noise Contours**
    - The study identifies 133 homes within Jefferson Township as falling within the 60-65 DNL contour, impacting approximately 242 residents. Given that noise levels at or above this range are considered detrimental to people, ensuring the accuracy of these contours is critical to understanding the full impact on affected residents. 4.1
2. **Land Use Classification Discrepancies**
    - Parcel 170-000125 is identified as commercial in the study, yet it is currently zoned for planned residential use and was most recently in agricultural use. Table 2-1 of the study indicates that no interior noise level reduction is required for commercial land use, which could lead to an inaccurate assessment of noise mitigation needs for this property. 2.4
    - Parcel 171-000017 is also categorized as commercial property, yet it is owned and operated by the Dominican Sisters St. Mary of the Springs as the Shepherd's Corner Ecology Center. This property is primarily preserved greenspace and agricultural land, serving an ecological and educational purpose. Its classification as commercial does not accurately reflect its use and could lead to incorrect assumptions about noise compatibility. 2.5

- Additionally, properties classified as "101 - Cash Grain/Gen Farm" by the Franklin County Auditor appear to have been designated as commercial land use in Exhibit 2-2. This misrepresentation could impact how noise compatibility measures are applied to agricultural areas. **2.6**

- While there is a private golf course within the Jefferson Meadows neighborhood, it is important that any land use considerations do not downplay the fact that the area is primarily composed of single-family homes. Ensuring that the study appropriately reflects the residential character of the community is critical when evaluating the impact of expanded noise contours. **2.1 & 2.7**

- While many of these land use discrepancies fall outside the 60-65 DNL noise contours, we feel it is important to bring them to your attention to ensure the report accurately reflects current land use patterns. Accurate data is critical for future decision-making, particularly as development pressures, flight patterns, and noise impacts evolve over time. **2.8**

3. **Lag Between Noise Measurement Data and Flight Pattern Analysis**

   - The short-term noise measurements used in the study were taken in November 2019, but flight track locations and percent distributions for the Existing (2024) Baseline noise exposure contour were derived from radar data collected between July 2022 and August 2023. This lag in data collection has raised concern among residents about the accuracy of the study's findings, as flight operations and traffic patterns may have changed significantly since the original noise measurements were taken.

   - For example, at Site Number S-17 (Poppy Hills Drive and Keystone Ranch Court), an Lmax of 63.9 dB was recorded on November 11, 2019. However, without updated noise measurement data to align with more recent flight patterns, the study may not accurately reflect current noise exposure levels in Jefferson Township. **1.2**

4. **Health Impacts of Noise Exposure**

   - Prolonged exposure to elevated noise levels has well-documented health effects, including sleep disturbances, cardiovascular risks, and reduced quality of life. It is important that the study fully considers the long-term health implications for residents living within the 60-65 DNL contour and adjacent areas. **1.3**

We appreciate the opportunity to submit these comments as part of the public review process. Thank you for your consideration of these concerns as the study progresses.

Sincerely,

Dion Grener
Township Administrator, Public Safety Director
On behalf of the Jefferson Township Board of Trustees

From: Desiree McQuiller
To: L&B | CMH-P150
Subject: Noise Compatibility Study
Date: Friday, January 31, 2025 2:41:58 AM

You don't often get email from dlmcquiller@yahoo.com. Learn why this is important

I am a resident at 2698 N Cassady and I have questions about this study. I would like to know if you will be hosting another meeting. I was unable to attend the most recent meeting owing to I did not know about it until I watched the news about 4am. I work 2nd shift. However, I would love to have more information about this because with the increased traffic and people I hear nothing but cars and trucks all day in this house. During the day I hear the airplanes extremely well. 4.2

I have questions about what is being done to reduce the noise and vibrations from the above-mentioned issues. I was unaware that any type of study was being conducted owing to I have recently begun assisting my elderly mother with the house and she advised me that she was unaware of anything being done about the noise levels in this area. 1.4

Thank you for your time.

Desiree McQuiller

From: L&B | Internet
To: L&B | CMH-P150
Subject: New submission from Feedback
Date: Monday, January 27, 2025 10:01:20 PM

Name

Brigitte Prosch

Email

proschb@aol.com

Message

I am not able to attend your public meeting this week so I am submitting my question here: What is the anticipated increase in takeoffs to the east and any increase in noise? I live on Howland Drive and when planes are taking off to the east they fly directly over my house. The noise is very loud and increased traffic would directly impact us.

Thank you

1.5

1.1

From: Matthew Satterwhite
To: L&B | CMH-P150
Subject: Noise study comment
Date: Friday, February 14, 2025 4:26:46 PM

You don't often get email from satterwhitematthew@gmail.com. Learn why this is important

Greetings,

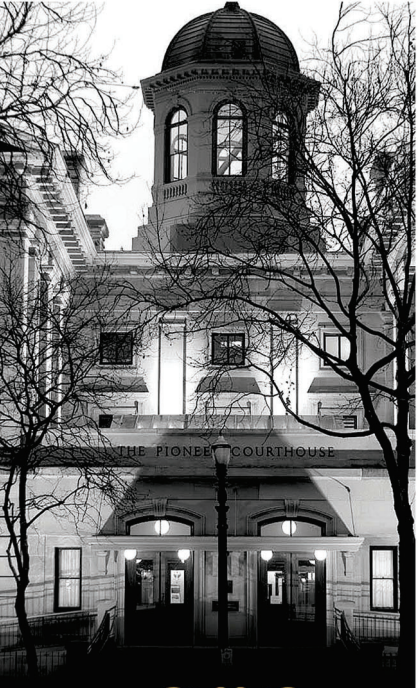
My name is Matthew Satterwhite. I live in Blacklick at 1085 Poppy Hills Drive in Blacklick. That is in the Jefferson Meadows neighborhood on the Jefferson Country Club in the noise impacted zone.

I previously shared comments on the record at the public hearing for the noise study at CMH. My concerns dealt with that volume of traffic and noise in every in reading planes coming north of the Taylor and Broad street paths out of the airport.

I realized that neglected to share the presence of a Bald Eagle that nests near the course and flies over on a consistent basis. I was not sure if the report is supposed to consider the habitat of an endangered species. The planes fly in the same space as the eagle over the course.

6.1

Matthew Satterwhite
614-273-4760



NAEGELI
DEPOSITION & TRIAL
(800) 528 - 3335
NAEGELIUSA.COM

Nationwide
COURT REPORTING
LEGAL VIDEOGRAPHY
REMOTE DEPOSITIONS
TRIAL PRESENTATION
LEGAL TRANSCRIPTION
COPYING AND SCANNING
LANGUAGE INTERPRETERS

Powerful
LITIGATION SUPPORT

PUBLIC HEARING FOR THE PART 150 NOISE COMPATIBILITY PROGRAM UPDATE FOR THE COLUMBUS REGIONAL AIRPORT AUTHORITY

HELD ON

THURSDAY, JANUARY 30, 2025

COMMENCING AT 5:00 P.M.

HELD AT

THE COLUMBUS AIRPORT MARRIOTT

1375 N. CASSADY AVENUE, DESHLER ROOM

COLUMBUS, OHIO 43219

PUBLIC HEARING FOR THE PART 150 NOISE COMPATIBILITY PROGRAM UPDATE FOR THE COLUMBUS REGIONAL AIRPORT AUTHORITY

HELD ON

THURSDAY, JANUARY 30, 2025

5:00 P.M.

HEARING OFFICER JUSTICE: Good evening, everyone. If I might have your attention real briefly? If I might grab everyone's attention real briefly?

It is now 5:00 p.m., so I am officially opening the public hearing for the Part 150 Noise Compatibility Study.

My name is Mindy Justice. I am the hearing officer for tonight.

The purpose of tonight's public hearing is to give all interested the opportunity to provide their comments officially on the noise compatibility program update.

The people that want to make comments officially can complete either a comment form, or if you want to have comments taken by the transcriptionist with me, please feel free.

If so, please sign up with a speaker

slip, and then we will call you in that order. We will be here until 8:00 p.m. Thank you.

(Pause.)

MR. SATTERWHITE: I would like to speak.

HEARING OFFICER JUSTICE: Sure. If you wouldn't mind, I need to do a brief little intro --

MR. SATTERWHITE: No problem.

HEARING OFFICER JUSTICE: -- to say thank you.

After I alert you of when to begin do -- can you provide your name and address for the record just so we have that?

Speak clearly, and direct your comments to me and the court reporter. You will have three minutes. I would ask you to keep it to three minutes so that we can be timely if there is a line, but otherwise understand --

MR. SATTERWHITE: Would you rather have that copy?

HEARING OFFICER JUSTICE: As the hearing officer, I wanted to let you know that I can provide answers related to questions related to logistics of this hearing. Others should be

directed to the technical experts in the room.

So with that, I will open the floor to your testimony, please.

MR. SATTERWHITE: Okay. You ready?

HEARING OFFICER JUSTICE: I am.

MR. SATTERWHITE: I am Matthew Satterwhite. My address is 1085 Poppy Hills Drive, Blacklick, Ohio 43004. I am a member of the Jefferson Meadows Homeowners Association and the Jefferson Country Club, which sits between Havens Corner and Taylor Road to the north and south and Reynoldsburg, New Albany, and Taylor Station to the east and west.

As a homeowner and member of the Jefferson Meadows HOA as well as a member of the private Jefferson Country Club, I am writing to express concerns regarding the current and future noise levels as outlined in the 2024 and 2029 noise exposure maps and processes.

Key concerns:

One. Misclassification of land use:

The study maps incorrectly designate the housing development and country club as park/recreation land. This area is a high-value housing community and private business country

2.1

club.

The classification as recreation land fails to consider the diminution in home values, the health of the residents, and the value of the private country club.

According to Table 2-1 in the report, parks and recreation areas receive no real consideration for compatibility, whereas single, two, and multifamily homes receive higher consideration.

Two. Inaccurate flight path representations:

Over the past year, the landing and takeoff patterns have changed and are not reflected in the study. The actual flight path now passes directly over the center of the golf course and the Jefferson Meadows Housing Division, which was not identified as a single-family residential community on the map, Exhibit 3-1.

The future noise exposure area expands to the edge of the country club and homes in the HOA; yet, maps still show the flights as south of the property. The expectation based on the current experience is that this will further expand traffic directly over the houses and the course.

2.2
1.3
2.3
3.1
3.4
2.1
2.9 & 3.1

In a side note, I just talked to the expert, and he did point out that there is a change between where the sound equipment was placed and the flight patterns that have recently been discovered, which leads to number three, inadequate noise measurement:

The short-term field noise measurement for this community and country club was inadequate. The loudest event recorded was a 63.9 decibel at Poppy Hills Drive Keystone Ranch Court before the flight patterns moved directly over the area.

It appears these readings were taken in prior years, 2019 before recent changes. The future noise expectations pushed this area further out guaranteeing increased noise in these sensitive areas.

Perhaps the designation as only recreational land resulted in the inadequate short-term measurement. It was just explained to me that the short term, which was S-17 in the report, was done in 2019, whereas the flight patterns and the change over the past year directly over the course, those weren't in existence at the time they actually did the noise report.

So request for the report:

3.4

1.2

2.1

3.4

Until I can report back to the country club and Jefferson Meadows HOA and gather further comments on concerns, I offer the following suggestion for the formal record:

Formal request: With the inherent faults in the study outlined above, I urge the CMH Airport Authority to recommend and support the FAA in limiting flight patterns to avoid going north of Taylor Road upon landing and takeoff, thereby avoiding the golf course and the community.

This recommendation, referred to as "straightout departures" in the report seeks the Airport Authority's advocacy for straightout takeoff and straight-in landing patterns within the Taylor Road corridor, avoiding the country club and homes in the HOA as the noise remedy. This should be included as a noise compatibility program measure in the report.

4.4

5.1

Thank you.

HEARING OFFICER JUSTICE: Thank you for your time.

MR. SATTERWHITE: All right. Thank you.

(With no one requesting to speak, the public hearing was recessed until 8:00 p.m. when

the following discussion was held:)

HEARING OFFICER JUSTICE: It is now 8:00 p.m., and there are no more speakers waiting to be heard. Therefore, I am officially closing the public hearing. Thank you for your time.

(Hearing concluded at 8:02 p.m.)

C E R T I F I C A T E

I, George J. Staiduhar, Stenographer Transcriptionist, do hereby certify that I attended the taking of the foregoing hearing, wrtoe the same in stenotype, and that this is a true and correct transcript of my notes in their entirety.

George J. Staiduhar
Notary Public
within and for the State of Ohio
My Commission expires August 1, 2027.

1

1085 4:7
150 2:1,14

2

2-1 5:6
2019 6:13,21
2024 4:18
2025 2:5
2029 4:18

3

3-1 5:19
30 2:5

4

43004 4:8

5

5:00 2:6,12

6

63.9 6:9

8

8:00 3:2 7:25

A

actual 5:15
address 3:13 4:7
advocacy 7:13
Airport 2:3 7:7,13
Albany 4:12
alert 3:12
answers 3:24
appears 6:12
area 4:24 5:20 6:11,14
areas 5:7 6:16
Association 4:9
attention 2:9,10
Authority 2:3 7:7
Authority's 7:13
avoid 7:8
avoiding 7:10,15

B

back 7:1
based 5:23
begin 3:12
Blacklick 4:8
briefly 2:10,11
business 4:25

C

call 3:1
center 5:16
change 6:2,22
changed 5:14
classification 5:2
club 4:10,16,23 5:1,5,21 6:8 7:2, 15
CMH 7:6
COLUMBUS 2:3
comment 2:22
comments 2:19, 21,23 3:16 7:3
community 4:25 5:18 6:8 7:10
compatibility 2:2, 14,20 5:8 7:17
complete 2:22
concerns 4:17,20 7:3
consideration 5:8,10
copy 3:21
Corner 4:11
corridor 7:15
country 4:10,16, 23,25 5:5,21 6:8 7:1,15
court 3:16 6:10
current 4:17 5:23

D

decibel 6:9
departures 7:12
designate 4:22
designation 6:17
development 4:23
diminution 5:3
direct 3:15
directed 4:1
directly 5:16,25 6:11,22
discovered 6:5
Division 5:17
Drive 4:7 6:10

E

east 4:13
edge 5:21
equipment 6:3
evening 2:9
event 6:9
everyone's 2:10
Exhibit 5:19
existence 6:23
expand 5:24
expands 5:20
expectation 5:23
expectations 6:14
experience 5:24
expert 6:2
experts 4:1
explained 6:19
exposure 4:19 5:20
express 4:17

F

FAA 7:7

fails 5:3
faults 7:6
feel 2:24
field 6:7
flight 5:11,15 6:4, 11,21 7:8
flights 5:22
floor 4:2
form 2:22
formal 7:4,5
free 2:24
future 4:17 5:20 6:14

G

gather 7:2
give 2:18
golf 5:16 7:10
Good 2:8
grab 2:10
guaranteeing 6:15

H

Havens 4:10
health 5:4
hearing 2:1,8,13, 16,18 3:6,10,22, 23,25 4:5 7:20,25
HELD 2:4
high-value 4:24
higher 5:9
Hills 4:7 6:10
HOA 4:15 5:22 7:2,16
home 5:3
homeowner 4:14
Homeowners 4:9
homes 5:9,21 7:16
houses 5:25
housing 4:23,25 5:17

I

identified 5:18
Inaccurate 5:11
inadequate 6:5,8, 18
included 7:17
incorrectly 4:22
increased 6:15
inherent 7:5
interested 2:18
intro 3:8

J

JANUARY 2:5
Jefferson 4:9,10, 15,16 5:17 7:2
Justice 2:8,15 3:6,10,22 4:5 7:20

K

Key 4:20
Keystone 6:10

L

land 4:21,24 5:2 6:18
landing 5:13 7:9, 14
leads 6:5
levels 4:18
limiting 7:8
logistics 3:25
loudest 6:9

M

make 2:21
map 5:19
maps 4:19,22 5:22
Matthew 4:6
Meadows 4:9,15 5:17 7:2
measure 7:18
measurement 6:6,7,19
member 4:8,14, 15
mind 3:7
Mindy 2:15
minutes 3:17,18
Misclassification 4:21
moved 6:11
multifamily 5:9

N

noise 2:1,14,19 4:18 5:20 6:6,7, 14,15,24 7:16,17
north 4:11 7:8
note 6:1
number 6:5

O

offer 7:3
officer 2:8,16 3:6, 10,22,23 4:5 7:20
officially 2:13,19, 22
Ohio 4:8
open 4:2
opening 2:13
opportunity 2:18
order 3:1
outlined 4:18 7:6

P

p.m. 2:6,12 3:2 7:25
park/recreation 4:24
parks 5:7
Part 2:1,13

passes 5:15
past 5:13 6:22
path 5:11,15
patterns 5:14 6:4, 11,22 7:8,14
Pause 3:3
people 2:21
point 6:2
Poppy 4:7 6:10
prior 6:13
private 4:16,25 5:5
problem 3:9
processes 4:19
program 2:2,20 7:17
property 5:23
provide 2:19 3:13,24
public 2:1,13,17 7:25
purpose 2:17
pushed 6:14

Q

questions 3:24

R

Ranch 6:10
readings 6:12
ready 4:4
real 2:10,11 5:7
receive 5:7,9
recent 6:13
recently 6:4
recessed 7:25
recommend 7:7
recommendation 7:11
record 3:14 7:4
recorded 6:9
recreation 5:2,7
recreational 6:18
referred 7:11
reflected 5:14
REGIONAL 2:3
related 3:24
remedy 7:16
report 5:6 6:21, 24,25 7:1,12,18
reporter 3:16
representations 5:12
request 6:25 7:5
requesting 7:24
residential 5:18
residents 5:4
resulted 6:18
Reynoldsburg 4:12
Road 4:11 7:9,15
room 4:1

S

S-17 6:20
Satterwhite 3:20 4:7
SATTTERWHITE 3:4,9 4:4,6 7:22
seeks 7:12
sensitive 6:15
short 6:20
short-term 6:7,19
show 5:22
side 6:1
sign 2:25
single 5:8
single-family 5:18
sits 4:10
slip 3:1
sound 6:3
south 4:11 5:22
speak 3:5,15 7:24
speaker 2:25
Station 4:12
straight-in 7:14
straightout 7:12, 13
study 2:14 4:22 5:15 7:6
suggestion 7:4
support 7:7

T

Table 5:6
takeoff 5:14 7:9, 14
talked 6:1
Taylor 4:11,12 7:9,15
technical 4:1
term 6:20
testimony 4:3
THURSDAY 2:5
time 6:24 7:21
timely 3:18
tonight 2:16
tonight's 2:17
traffic 5:24
transcriptionist 2:24

U

understand 3:19
update 2:2,20
urge 7:6

V

values 5:3

W

wanted 3:23
west 4:13
writing 4:16

Y

year 5:13 6:22

years 6:13

Response to January 2025 Public Hearing Comments

This page intentionally left blank

Response to Comments **Part 1 of 10**

Comment Number	Commenter	Comment	Response
1.0 – Noise and Overflights			
1.1	Brigitte Prosch, AJ Rogish and Scott Wise, Dion Grener (on behalf of the Jefferson Township Board of Trustees)	General comment about increased noise levels	Airlines operating at John Glenn Columbus International Airport (CMH) carefully schedule their flights to meet the needs of both passengers and cargo shipments. To ensure we have an accurate understanding of future noise impacts, our Part 150 Noise Compatibility Study included a five-year forecast (2029) of expected aircraft activity. This forecast accounts for anticipated increases in air traffic. We'd like to emphasize that there have been no changes to flight procedures that would affect the number of overflights in any specific area. The south runway (Runway 10R/28L) was closed at CMH for rehabilitation from April 2024 to October 2024, which temporarily caused more operations to occur on the north runway (Runway 10L/28R). The locations mentioned by the commenters are outside the 65+ DNL noise exposure contours established in our Part 150 Study. Therefore, following Federal guidelines, these land uses are considered compatible with current aircraft noise levels.
1.2	AJ Rogish and Scott Wise, Matthew Satterwhite, Dion Grener (on behalf of the Jefferson Township Board of Trustees)	Inadequate noise measurements taken in 2019, which does not represent the current noise levels	The temporary noise measurement program was conducted following FAA guidelines. The goal was to gather and analyze real-world noise data from individual aircraft to ensure our computer model, the Aviation Environmental Design Tool (AEDT), accurately reflects actual noise levels at CMH. As detailed in Appendix B, "Noise Measurements and Complaints, measured noise data was compared with the AEDT's predicted noise profiles for the most common aircraft at CMH. This comparison confirmed the model's accuracy. The aircraft that were most frequently operating at CMH in 2019 are still the primary aircraft using the airport today. Because the measurement program focused on individual aircraft events for direct comparison with the model, the 2019 data remains relevant and reliable. For a more detailed explanation, please refer to Appendix B.

Response to Comments **Part 2 of 10**

Comment Number	Commenter	Comment	Response
1.3	Dion Grener (on behalf of the Jefferson Township Board of Trustees) and Matthew Satterwhite	Health impacts of noise need to be more fully considered in the report	We acknowledge that concerns regarding potential health impacts from living near an airport are valid and understandable. Individual sensitivities to aircraft noise can vary significantly. It's important to emphasize that federal policies regarding noise and noise mitigation are developed with careful consideration of potential impacts on sleep, quality of life, and other health factors. These policies reflect a thorough assessment of available scientific research and aim to balance community well-being with the operational requirements of air transportation.
1.4	Desiree McQuiller	What is being done to reduce the noise and vibrations from airplanes?	We understand your concern about reducing noise and vibrations from airplanes. The Columbus Regional Airport Authority (CRAA) is committed to mitigating these impacts. While our residential sound insulation program has helped reduce interior noise for approximately 800 homes significantly impacted by past aircraft noise levels, as determined by Federal guidelines, we also focus on reducing noise at its source. Based on the current Part 150 Study and Federal requirements, the current noise levels do not trigger new eligibility for the residential sound insulation program. However, we remain dedicated to exploring and implementing noise reduction strategies to improve the quality of life for our neighbors.
1.5	Brigitte Prosch	What is the anticipated increase in takeoffs to the east and any increase in noise?	The number of aircraft operations at CMH is expected to increase to meet demand for air travel. The noise analysis prepared for this Part 150 Study included a forecast of aircraft activity expected to occur five years into the future (2029) to account for increased flights. The Future (2029) Noise Exposure Contour shown on Exhibit NEM-2 and Exhibit 3-2 in this document shows the noise contours that were developed based on this forecast. A copy of the forecast is included in Appendix H of this document.

Response to Comments **Part 3 of 10**

Comment Number	Commenter	Comment	Response
1.6	AJ Rogish and Scott Wise	The Study does not accurately represent noise levels in our community.	This Study prepared noise contours for existing (2024) conditions and future (2029) conditions. The Existing (2024) Noise Exposure Contour was based on actual data from aircraft operations representing the most recent 12 months of data that was available when the noise modeling began. The Future (2029) Noise Exposure Contour is based on a forecast of aviation activity that was prepared for this Study. Actual radar data was collected and analyzed from select periods between July 2022 and August 2023. There have been no changes to flight procedures since that time. Therefore, this data does accurately represent current noise conditions and conditions expected by 2029. (See Appendix C for more information about the noise modeling input data) Noise measurements were conducted in 2019 for comparison of single event data only. Noise measurement data was compared to noise profiles in the AEDT to validate that the modeled noise levels for the most common aircraft types at CMH was consistent with the noise measurement data. The aircraft most commonly operating at CMH in 2019 still currently operate at CMH. The noise measurement data was not intended to provide an accurate representation of current noise exposure levels, rather it was intended to provide a sample of single event data to validate the input data into the computer noise model. The computer noise model was used to prepare noise exposure contours that represent current and forecast future noise levels. This modeling remains valid and accurately represents current (2024) conditions and conditions forecast to occur in 2029. (See Appendix B for more information about the noise measurement program.)
1.7	AJ Rogish and Scott Wise	Aircraft fly at low altitudes over our community.	Flight procedures at CMH are developed and implemented by the Federal Aviation Administration to ensure safety of flight. The procedures described in the comment are accounted for in the modeling calculations for the noise contours that were developed for this study.

Response to Comments **Part 4 of 10**

Comment Number	Commenter	Comment	Response
1.8	AJ Rogish and Scott Wise	Future traffic will only raise the noise levels.	The number of aircraft operations is expected to increase at CMH to meet the demand for air travel. This Part 150 Study included a forecast of aviation activity and Future (2029) Noise Exposure Contour to show the expected noise levels based on that forecast.
2.0 – Land Use			
2.1	AJ Rogish and Scott Wise, Matthew Satterwhite, Dion Grener (on behalf of the Jefferson Township Board of Trustees)	The maps incorrectly designate housing development and country club as recreational land.	The properties the commenter is referring to are correctly designated on the maps and in this Part 150 Study. The neighborhood includes single family homes surrounded by a golf course & country club. The single family homes are correctly designated as Single-Family Residential and the surrounding holes of the golf course and country club are designated as Recreational.
2.2	Matthew Satterwhite, AJ Rogish, and Scott Wise	Effects of noise on housing values	The potential effect of airport noise on property value is a complex issue due to the variety of factors that may affect property value and the subjectivity in real estate values. Studies on the effects of noise on property values have shown that property values of homes near an airport are affected by a variety of factors, making it difficult to pinpoint one factor or another as the sole reason for differences in property values.
2.3	Matthew Satterwhite	Recreational land uses receive no real consideration for compatibility.	This Study follows FAA guidelines regarding land use compatibility with airport noise. As shown in Appendix A, Table A-1, all recreational land uses, with the exception of outdoor music shells and amphitheaters, are compatible with noise levels between 65-70 DNL. The Noise Exposure Maps prepared for this Study show the 65+ DNL noise exposure contour. The 60+ DNL is also shown for informational purposes. Other than the Airport Golf Course, there are no recreational uses within the 65+ DNL of the Existing (2024) or Future (2029) Noise Exposure Contours.

Response to Comments **Part 5 of 10**

Comment Number	Commenter	Comment	Response
2.4	Dion Grener (on behalf of the Jefferson Township Board of Trustees)	Parcel 170-000125 is identified as commercial property, yet it is currently zoned for planned residential use and was most recently in agricultural use. Table 2-1 of the study indicates that no interior noise level reduction is required for commercial land use, which could lead to an inaccurate assessment of noise mitigation needs for this property.	The parcel noted in the comment is classified by the Franklin County Assessor as “101 - Cash Grain/Gen Farm,” which was coded as “commercial” in the Draft Part 150 Noise Compatibility Study. It has been reclassified as “agricultural” in the Final Part 150 Noise Compatibility Study; however, on the Future (2029) NEM it will be listed as “transitional” since it is proposed for new residential development. The parcel is outside of the 65+ DNL (and 60+ DNL) noise exposure contour. Therefore, the property is not eligible for noise mitigation regardless of the land use so no inaccurate assessment of this parcel was made.
2.5	Dion Grener (on behalf of the Jefferson Township Board of Trustees)	Parcel 171-000017 is also categorized as commercial property, yet it is owned and operated by the Dominican Sisters St. Mary of the Springs as the Shepherd’s Corner Ecology Center. This property is primarily preserved greenspace and agricultural land, serving an ecological and educational purpose. Its classification as commercial does not accurately reflect its use and could lead to incorrect assumptions about noise compatibility.	The parcel noted in the comment is classified by the Franklin County Assessor as “Other Commercial Structure”, which was coded as “commercial” in the Draft Part 150 Noise Compatibility Study. Based on the information provided by the Jefferson Township Board of Trustees, this parcel has been reclassified as “institutional” in the Final Part 150 Noise Compatibility Study to better reflect the current use of the property. The parcel is outside of the 65+ DNL (and 60+ DNL) noise exposure contour. Therefore, the property is not eligible for noise mitigation regardless of the land use so no incorrect assumption about the land use compatibility for this parcel was made.
2.6	Dion Grener (on behalf of the Jefferson Township Board of Trustees)	Properties classified as "101 - Cash Grain/Gen Farm" by the Franklin County Auditor appear to have been designated as commercial land use in Exhibit 2-2. This misrepresentation could impact how noise compatibility measures are applied to agricultural areas.	The parcels noted in the comment were coded as “commercial” in the Draft Part 150 Noise Compatibility Study. Based on the information provided in the comment, these parcels have been reclassified as “agricultural” in the Final Part 150 Noise Compatibility Study. All of these parcel are located outside of the 65+ DNL (and 60+ DNL) noise exposure contour. Therefore, the properties are not eligible for noise mitigation regardless of the land use so no inaccurate assessment of these parcels were made.

Response to Comments **Part 6 of 10**

Comment Number	Commenter	Comment	Response
2.7	Dion Grener (on behalf of the Jefferson Township Board of Trustees)	While there is a private golf course within the Jefferson Meadows neighborhood, it is important that any land use considerations do not downplay the fact that the area is primarily composed of single-family homes. Ensuring that the study appropriately reflects the residential character of the community is critical when evaluating the impact of expanded noise contours.	The properties referred to in the comment are correctly designated on the maps and in this Part 150 Study. The neighborhood includes single family homes surrounded by a golf course & country club. The single-family homes are correctly designated as Single-Family Residential and the surrounding holes of the golf course and country club are designated as Recreational in this Study. All of these parcels are located outside of the 65+ DNL (and 60+ DNL) noise exposure contours.
2.8	Dion Grener (on behalf of the Jefferson Township Board of Trustees)	While many of the land use discrepancies fall outside of the 60-65 DNL noise contours, we feel it is important to bring them to your attention to ensure the report accurately reflects current land use pattern.	Thank you for making us aware of current use of the parcels mentioned in the comment letter. The land use discrepancies that are referred in the comment letter arise from differences between “tax classification” and existing use. The Franklin County Assessor lists these parcels as “Cash Grain / Gen Farm” or “Other Commercial Structure” and was labeled as “commercial” in the Draft Part 150 Study Document. Based on the information provided by the commenter, these parcels have been reclassified as “agricultural” or “institutional” in the Final Part 150 Study Document (see comments 2.4, 2.5, and 2.6). All of these parcels are outside of the 60+ DNL noise exposure contours.
2.9	Matthew Satterwhite	The future noise exposure area expands to the edge of the Jefferson Meadows neighborhood and Jefferson Country Club; yet the maps still show the flight tracks south of this property.	The Existing (2024) and Future (2029) Noise Exposure Contours show noise levels of 75, 70, 65, and 60 DNL. In accordance with Federal policy, the threshold of significance is 65 DNL. The 60 DNL noise exposure contour is shown for informational purposes in this Study. The majority of flights departing from Runway 10L do remain south of this community; however, a small percentage turn north as directed by FAA ATCT personnel to maintain safety and efficiency. The flight tracks shown on the maps for this Study that were used in the noise modeling do include tracks over these communities.

Response to Comments **Part 7 of 10**

Comment Number	Commenter	Comment	Response
3.0 – Flight Tracks			
3.1	AJ Rogish and Scott Wise, Matthew Satterwhite	Inaccurate flight track maps do not account for the volume of tracks going over Jefferson Meadows.	The flight tracks used for modeling the noise exposure contours in this Part 150 were based on actual radar data collected between July 2022 and July 2023. Consolidated flight tracks were developed in the computer noise model to represent radar flight tracks as shown in Exhibits C-10 through C-16. Each flight track represents a percentage of operations as shown in Tables C-4 through C-6. The flight tracks do include operations that overfly the neighborhood mentioned by the commenters based on average-annual conditions.
3.2	AJ Rogish and Scott Wise	It is our understanding that noise flight paths would not be routed over our community. Previous discussion with Airport staff indicated that flights were not supposed to fly north of Taylor Road.	Flight corridors are established by the FAA to ensure safety and capacity. The noise contours developed for this study include noise levels based on the existing flight corridors. Standard departure procedures direct aircraft to maintain their initial heading until reaching an altitude of 4,000 feet or a point 5 miles from the departure end of the runway. However, FAA Airport Traffic Controllers have the ability to turn aircraft up to 15 degrees to ensure safety and efficiency of the airspace. This 15-degree heading does direct some aircraft over the community mentioned by the commenters. Review of radar data shows that the vast majority of aircraft maintain a straight out heading and do not overfly the community mentioned by the commenters. The noise modeling conducted for this Study accounts for the flights that are turned on a 15-degree heading.

Response to Comments **Part 8 of 10**

Comment Number	Commenter	Comment	Response
3.3	Dion Grener (Jefferson Township Board of Trustees)	With the Study anticipating a 20% increase in air traffic by 2029 and eastbound takeoffs being the Airport's preferred direction, prioritizing air traffic over and in the vicinity of Jefferson Township, these concerns are particularly relevant to our community.	The number of aircraft operations is expected to increase at CMH to meet the demand for air travel. This Part 150 Study included a forecast of aviation activity and Future (2029) Noise Exposure Contour to show the expected noise levels based on that forecast. The Airport operates in either an east flow configuration, meaning that aircraft land from the west heading east and take off to the east; or west flow, meaning that aircraft land from the east heading west and take off to the west. The FAA Airport Traffic Control Personnel determine the appropriate operating condition based on wind direction and other safety considerations. The preferred configuration according to the Airport's approved Noise Compatibility Program is east flow because that directs departures to the east where there is primarily commercial and industrial land uses immediately east of the Airport. To the west of the Airport there is a concentration of residential land uses. The intent is to minimize departures over the residential areas immediately west of the Airport.
3.4	Matthew Satterwhite	Flight tracks have changed	Radar data was collected and analyzed for this Study from time periods between July 2022 and July 2023. There have been no recent changes to flight procedures within five miles of the Airport and no changes to flight procedures have occurred over the community mentioned by the commenter. The south runway (Runway 10R/28L) was closed at CMH for rehabilitation from April 2024 to October 2024, which temporarily caused more operations to occur on the north runway (Runway 10L/28R). This may have been noticeable to residents of the Jefferson Meadows neighborhood. However, flight procedures have not changed and the majority of departures remain south of Taylor Road until reaching an altitude of 4,000 feet or a point 5 miles from the departure end of the runway.

Response to Comments **Part 9 of 10**

Comment Number	Commenter	Comment	Response
4.0 – Part 150 Process and Requirements			
4.1	Dion Grener (on behalf of the Jefferson Township Board of Trustees)	The study identifies 133 homes within Jefferson Township falling within the 60-65 DNL contour, impacting approximately 242 residents. Given that noise levels at or above this range are considered detrimental to people, ensuring the accuracy of these contours is critical to understanding the full impact on affected residents.	The Draft Part 150 Study Update was developed consistent with current 14 CFR Part 150 regulations. Based on FAA guidelines, residential land uses are not considered compatible with noise levels above DNL 65 dB. As such, noise levels outside of the DNL 65 dB were not evaluated nor reported for the purpose of this Part 150 Study Update. This does not mean that aircraft noise is not audible outside the DNL 65 dB noise contour, rather the intensity and frequency do not cause cumulative noise levels to exceed DNL 65 dB.
4.2	Desiree McQuiller	Will you be hosting another meeting?	No. The meeting held on January 30, 2025, was the final public meeting for this project.
4.3	AJ Rogish and Scott Wise	The Study is faulty due to the unfortunate delays caused by COVID. Action must be taken to deal with this gap in the data.	This Part 150 Study originally began in 2019 and was expected to be completed in 2021. However, due to the impact of Covid-19 on air travel, the Study has been updated. A revised forecast was prepared for this Study following the recovery in demand for air travel and aircraft operational data was obtained from July 2022 through July 2023, which was the most recent data available at the time the Study resumed. No notable changes to airport operations have occurred since 2023 that would affect the noise contour modeling conducted for this Study. All FAA guidelines with regards to Study process and methodology have been followed and there are no gaps in the data.
4.4	Matthew Satterwhite	There are inherent faults in the Study.	All FAA guidelines with regards to Study process and methodology have been followed.

Response to Comments **Part 10 of 10**

Comment Number	Commenter	Comment	Response
4.5	AJ Rogish and Scott Wise	This is the first time we have had an opportunity to comment on the Part 150 Noise Compatibility Study Report. There was no notice of the Study or any effort to involve our organization in the process.	This Part 150 Study originally began in 2019 and was expected to be completed in 2021. However, due to the impact of Covid-19 on air travel, the Study has been updated. Multiple online meetings were held in 2020 and 2021 to obtain input on the Study. The Public Meeting/Hearing held in January 2025 provided another opportunity to obtain public comments on the Draft Part 150 Noise Compatibility Study before it is submitted to the FAA for review. Notices of all meetings were published in local newspapers and posted on social media outlets up to 30 days before the meeting date.
5.0 – Mitigation			
5.1	AJ Rogish and Scott Wise, Matthew Satterwhite	Recommendation that flights stay south of Taylor Road when landing or taking off. The turn north over Jefferson Country Club must stop and that traffic turned at higher levels outside of the noise impacted zone, further away from the Airport where the noise can be further addressed with level and distance.	Standard departure procedures direct aircraft to maintain their initial heading until reaching an altitude of 4,000 feet or a point 5 miles from the departure end of the runway. However, FAA Airport Traffic Controllers have the ability to turn aircraft up to 15 degrees to ensure safety and efficiency of the airspace. Review of radar data shows that the vast majority of aircraft maintain a straight out heading and do not fly north of Taylor Road or overfly the Jefferson Country Club. The Jefferson Country Club and Jefferson Meadows residential subdivision are outside of the 65+ DNL noise exposure contours that were prepared for this Study. As such these land uses are not considered to be impacted by significant levels of aircraft noise.
6.0 – Environmental Concerns			
6.1	Matthew Satterwhite	A Bald Eagle nests near the course and flies over on a consistent basis. I was not sure if the report is supposed to consider the habitat of an endangered species. The planes fly in the same space as the eagle over the course.	This comment has been noted and included in the official record. Habitat considerations are outside of the scope of this project.

Appendix H - Forecast

This appendix presents the aviation forecasting efforts that were conducted for the Part 150 Noise Compatibility Study for the John Glenn Columbus International Airport (CMH).

2020 Aviation Activity Forecast

An Aviation Activity Demand Forecast was prepared based on actual operating data from 2018 and includes a forecast for conditions from 2019 through 2039. The Forecast was submitted to the FAA for review in January 2020. The FAA approved this Forecast on March 3, 2020. This forecast was prepared and submitted to FAA prior to the COVID-19 public health emergency. Due to the timing of the forecast and changes to aviation demand due to COVID-19, FAA requested that an updated forecast be prepared.

2023 Aviation Activity Forecast

A Forecast of Aviation Activity was prepared based on the Draft 2023 TAF. Due to the changes in the aviation industry, FAA requested a forecast update be prepared based on the Draft 2023 TAF from which an aircraft fleet mix could be developed for use in the Part 150 Study. Therefore, this forecast update has been prepared to provide fleet mix data for a 2024 base year and an out year of 2029. This forecast assumes total annual operations will be consistent with the Draft 2023 TAF. A copy of this forecast report, the 2023 Draft TAF, and FAA forecast approval letter, are included in this appendix.

This page intentionally left blank

Aviation Activity Forecast
December 2023

This page intentionally left blank

Part 150 Noise Compatibility Study

Forecast of Aviation Activity

John Glenn Columbus International Airport

Draft – December 2023

PREPARED FOR
Columbus Regional Airport Authority

PRESENTED BY
Landrum & Brown, Incorporated

This page intentionally left blank

Table of Contents

Page

Chapter 1 Background 1-3

Chapter 2 Fleet Mix Forecast Update 2-4

2.1 Annual Forecast 2-4
2.2 Fleet Mix Forecasts 2-4
2.2.1 Data Sources 2-4
2.2.2 Passenger Airlines Aircraft Fleet Mix 2-4
2.2.3 Non-Passenger Aircraft Fleet Mix 2-5

List of Tables

Page

TABLE 1 PASSENGER AIRLINES AIRCRAFT FLEET MIX 2-5
TABLE 2 NON-PASSENGER AIRCRAFT FLEET MIX 2-6

List of Exhibits

Page

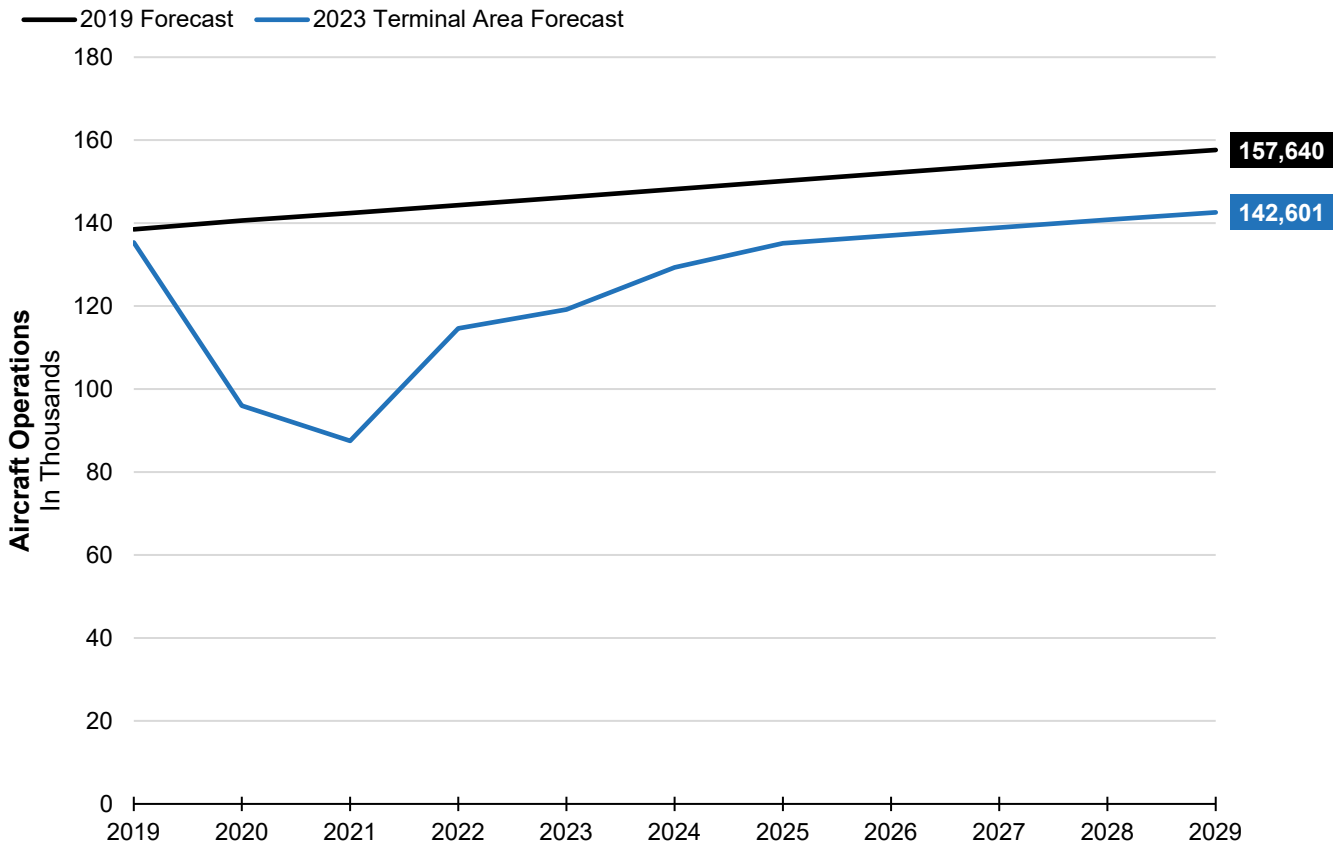
EXHIBIT 1 COMPARISON OF AIRCRAFT OPERATIONS FROM THE 2019 FORECAST TO THE 2023 TERMINAL AREA FORECAST 1-3

This page intentionally left blank

Chapter 1 Background

In 2019, a Forecast of Aviation Activity (2019 Forecast) was prepared in support of a Part 150 Noise Compatibility Study Update (Part 150 Study) for the John Glenn Columbus International Airport (CMH or Airport). That 2019 Forecast was approved by the Federal Aviation Administration (FAA) on March 3, 2020. Following approval, a reduction in global air traffic occurred due to the COVID-19 pandemic. As a result, the 2019 Forecast no longer reflected actual or projected near-term activity forecasts. The most recent FAA Terminal Area Forecast (TAF) which was released in February 2023 forecasts an overall lower level of annual traffic than was anticipated in the 2019 Forecast. **Figure 1** shows a comparison of aircraft operations from the 2019 Forecast and the 2023 TAF.

Exhibit 1 COMPARISON OF AIRCRAFT OPERATIONS FROM THE 2019 FORECAST TO THE 2023 TERMINAL AREA FORECAST



Sources: Part 150 Noise Compatibility Study, 2019. Federal Aviation Administration, Terminal Area Forecast, February 2023.

Due to the changes in the aviation industry, FAA requested a forecast update be prepared based on the 2023 TAF from which an aircraft fleet mix could be developed for use in the Part 150 Study. Therefore, this forecast update has been prepared to provide fleet mix data for a 2024 base year and an out year of 2029. This forecast assumes total annual operations will be consistent with the 2023 TAF. Various data sources were reviewed to develop a derivative fleet mix suitable for Part 150 noise modeling purposes as described in the following sections.

Chapter 2 Fleet Mix Forecast Update

2.1 Annual Forecast

The most recent release of the FAA Terminal Area Forecast (TAF) released in February 2023 was adopted for the annual enplaned passenger and the aircraft operations forecasts at CMH on an annual level. The share of air carrier and air taxi aircraft operations were segmented into passenger, all-cargo, and air taxi operations based on the data sources from the FAA and the Columbus Regional Airport Authority (CRAA).

2.2 Fleet Mix Forecasts

2.2.1 Data Sources

Data from the FAA's Traffic Flow Management System Counts (TFMSC) database, the Airport Noise Monitoring System (ANOMS) which includes flight information from the FAA, landing fee reports provided by CRAA, and data from published flights schedules via Cirium's Diio Mi database were consolidated and compared to determine any inconsistencies. All of the sources provided similar counts per aircraft types.

2.2.2 Passenger Airlines Aircraft Fleet Mix

The share of each passenger aircraft provided in the ANOMS data from September 2022 through August 2023 was applied to the 2024 estimate for passenger aircraft operations to determine the fleet mix for the base year. To determine how the passenger fleet mix would change over the forecast period, airline aircraft orders were reviewed. The following orders were assumed to have an impact on the fleet at the Airport.

- **Alaska Airlines**
  - 15 Boeing 737 Max 8
  - 21 Boeing 737 Max 9
  - 102 Boeing 737 Max 10
- **American Airlines**
  - 10 Airbus A321neo
  - 77 Boeing 737 Max 8
- **Breeze Airways**
  - 63 Airbus A220-300
- **Delta Air Lines**
  - 68 Airbus A220-300
  - 112 Airbus A321neo
  - 100 Boeing 737 Max 10
- **Frontier Airlines**
  - 49 Airbus A320neo
  - 137 Airbus A321neo
- **Spirit Airlines**
  - 39 Airbus A320neo
  - 62 Airbus A321neo
- **Sun Country**
  - 5 Boeing 737-900
- **Southwest Airlines**
  - 192 Boeing 737 Max 7
  - 161 Boeing 737 Max

It was assumed that these aircraft on order would replace a significant portion of the older aircraft in the airlines' fleets. Therefore, the share of aircraft would shift to the newer aircraft over the forecast period. It was also assumed that a majority of growth in aircraft operations would occur with the larger air carrier aircraft with a significant portion of the future growth being attributable to low-cost carriers.
Table 1 provides the fleet mix for 2024 and 2029 for passenger airlines at CMH.

TABLE 1 PASSENGER AIRLINES AIRCRAFT FLEET MIX

Aircraft	Seats	Annual Operations 2024	Annual Operations 2029
Passenger			
Air Carrier			
A21N	240	202	2,331
B752	199	69	0
A321	191	2,616	1,583
A20N	186	1,160	2,532
B3XM	189	0	0
B39M	178	422	1,116
B739	178	4,681	4,670
B38M	166	3,782	10,009
B738	160	11,960	9,039
A320	157	5,027	6,009
B37M	150	0	8,826
BCS3	137	264	876
A319	132	4,316	3,211
B737	126	14,142	9,126
E195	124	391	0
B712	110	814	985
E190	108	303	367
Total Air Carrier		***50,149***	***60,680***
Commuter			
E75S	76	8,786	8,645
E75L	76	1,161	1,142
CRJ9	76	4,724	4,648
E170	65	23,374	22,999
CRJ7	50 - 65	814	801
E145	50	198	195
E45X	50	648	637
LJ45	50	0	0
CRJ2	50	1,409	1,387
Total Commuter		***41,114***	***40,454***
Total Passenger		**91,263**	**101,134**

Sources: Federal Aviation Administration, Terminal Area Forecast, March 2023. Airport Noise Monitoring System. Landrum & Brown Analysis.

2.2.3 Non-Passenger Aircraft Fleet Mix

It was assumed with a majority of cargo operations occurring at nearby Rickenbacker International Airport, there would be no growth in cargo aircraft operations and no changes to the aircraft utilized at CMH. For air taxi aircraft operations, it was assumed that jet aircraft would increase at the fastest rate, followed by turbo prop aircraft over the forecast period. The share of aircraft within the specific categories was not changed.

Similarly, it was assumed that jet and turbo prop operations in the general aviation segment would increase while piston aircraft would slightly decrease. These trends are consistent with the FAA's Aerospace Forecast. It was assumed that that would be no material changes to military aircraft. Table 2 provides the fleet mix for non-passenger aircraft.

TABLE 2 NON-PASSENGER AIRCRAFT FLEET MIX

	Annual Operations	
Aircraft	2024	2029
Cargo		
SB20	55	55
E120	20	20
B190	16	16
B735	8	8
SW4	7	7
BE99	6	6
SF34	4	4
Total Cargo	***116***	***116***
Air Taxi		
Jet		
C68A	2,479	2,775
E55P	1,691	1,893
C56X	1,324	1,482
CL35	1,265	1,416
CL30	838	938
C25B	743	832
CRJ2	682	763
BE40	552	618
C680	435	487
Other Jet	*5,438*	*6,089*
Total Jet	***15,447***	***17,293***
Turbo Prop		
PC12	1,265	1,342
B350	470	498
Other Turbo Prop	*304*	*324*
Total Turbo Prop	***2,039***	***2,164***
Piston		
BE58	433	442
C172	55	56
Other Piston	*267*	*271*
Total Piston	***755***	***769***
Total Air Taxi	***18,241***	***20,226***

TABLE 2 NON-PASSENGER AIRCRAFT FLEET MIX (CONTINUED)

Aircraft	Annual Operations 2024	2029
General Aviation		
Jet		
Code III	808	887
Code II	11,740	12,888
Code I	2,335	2,563
Total Jet	***14,884***	***16,339***
Turbo Prop	0	0
Code III	6	6
Code II	1,035	1,058
Code I	734	751
Total Turbo Prop	***1,775***	***1,815***
Piston		
Code III	0	0
Code II	13	13
Code I	2,740	2,657
Total Piston	***2,753***	***2,670***
Helicopter	**33**	**35**
Total General Aviation	***19,445***	***20,859***
Military		
Non-Specified	*266*	*266*
Total Military	**266**	**266**

Sources: Federal Aviation Administration, Terminal Area Forecast, March 2023. Airport Noise Monitoring System. Landrum & Brown Analysis.

This page intentionally left blank

Draft 2023 FAA Terminal Area Forecast
Issued July 2023

This page intentionally left blank

APO TAF Quick Data Summary Report - Facility

For GreatLakes -- 2023 Scenario

Region State: AGL-OH **LOCID: CMH Combined TRACON &Tower with Radar**

City: COLUMBUS **Airport: JOHN GLENN COLUMBUS INTL** **2022 Based Aircraft: 88**

		--ENPLANEMENTS--			--AIRPORT OPERATIONS--									--TRACON--
					Itinerant Operations					Local Operations				
Fiscal Year		Air Carrier	Commuter	Total	Air Carrier	AT & Commuter	GA	Military	Total	Civil	Military	Total	Total OPS	Total OPS
2018		2,486,446	1,405,467	3,891,913	81,737	30,143	20,542	519	132,941	0	0	0	132,941	330,611
2019		2,752,180	1,372,075	4,124,255	88,343	26,019	20,219	738	135,319	0	0	0	135,319	335,346
2020		1,505,365	777,465	2,282,830	63,164	17,478	14,900	408	95,950	28	0	28	95,978	271,912
2021		1,589,430	746,844	2,336,274	56,561	13,653	16,896	382	87,492	22	0	22	87,514	278,018
2022		2,456,961	1,089,663	3,546,624	78,225	17,029	18,999	351	114,604	0	0	0	114,604	321,361
2023	*	3,021,697	914,283	3,935,980	84,187	16,357	18,332	266	119,142	26	0	26	119,168	316,286
2024	*	3,193,350	975,665	4,169,015	93,313	16,307	19,415	266	129,301	30	0	30	129,331	334,930
2025	*	3,339,465	1,024,426	4,363,891	98,037	16,143	20,665	266	135,111	30	0	30	135,141	344,042
2026	*	3,404,271	1,044,594	4,448,865	100,833	15,185	20,706	266	136,990	30	0	30	137,020	343,578
2027	*	3,470,834	1,065,309	4,536,143	102,849	15,012	20,747	266	138,874	30	0	30	138,904	344,954
2028	*	3,538,959	1,086,425	4,625,384	104,560	15,164	20,788	266	140,778	30	0	30	140,808	348,685
2029	*	3,603,657	1,106,499	4,710,156	106,159	15,317	20,829	266	142,571	30	0	30	142,601	352,484
2030	*	3,668,094	1,126,523	4,794,617	107,739	15,471	20,871	266	144,347	30	0	30	144,377	356,317
2031	*	3,733,471	1,146,789	4,880,260	109,337	15,627	20,912	266	146,142	30	0	30	146,172	360,125
2032	*	3,799,887	1,167,372	4,967,259	110,953	15,784	20,953	266	147,956	30	0	30	147,986	363,885
2033	*	3,866,609	1,188,034	5,054,643	112,566	15,943	20,995	266	149,770	30	0	30	149,800	367,663
2034	*	3,937,120	1,209,830	5,146,950	114,276	16,103	21,036	266	151,681	30	0	30	151,711	371,477
2035	*	4,008,083	1,231,722	5,239,805	115,986	16,266	21,078	266	153,596	30	0	30	153,626	375,470
2036	*	4,082,433	1,254,665	5,337,098	117,781	16,429	21,120	266	155,596	30	0	30	155,626	379,517
2037	*	4,161,708	1,279,021	5,440,729	119,702	16,595	21,162	266	157,725	30	0	30	157,755	383,634
2038	*	4,241,718	1,303,605	5,545,323	121,631	16,763	21,203	266	159,863	30	0	30	159,893	387,829
2039	*	4,321,321	1,328,039	5,649,360	123,536	16,932	21,245	266	161,979	30	0	30	162,009	392,036
2040	*	4,402,393	1,352,940	5,755,333	125,468	17,102	21,287	266	164,123	30	0	30	164,153	396,311
2041	*	4,483,077	1,377,666	5,860,743	127,377	17,274	21,330	266	166,247	30	0	30	166,277	400,556
2042	*	4,566,095	1,403,130	5,969,225	129,339	17,448	21,372	266	168,425	30	0	30	168,455	404,906
2043	*	4,648,987	1,428,520	6,077,507	131,284	17,624	21,414	266	170,588	30	0	30	170,618	409,294
2044	*	4,733,678	1,454,465	6,188,143	133,265	17,801	21,456	266	172,788	30	0	30	172,818	413,744
2045	*	4,822,478	1,481,618	6,304,096	135,347	17,981	21,499	266	175,093	30	0	30	175,123	418,304
2046	*	4,911,598	1,508,851	6,420,449	137,425	18,162	21,541	266	177,394	30	0	30	177,424	422,936
2047	*	5,002,779	1,536,709	6,539,488	139,547	18,345	21,584	266	179,742	30	0	30	179,772	427,668
2048	*	5,095,215	1,564,930	6,660,145	141,690	18,530	21,627	266	182,113	30	0	30	182,143	432,501
2049	*	5,190,215	1,593,914	6,784,129	143,890	18,716	21,670	266	184,542	30	0	30	184,572	437,461
2050	*	5,288,599	1,623,920	6,912,519	146,168	18,905	21,712	266	187,051	30	0	30	187,081	442,548
GR1		2.78	1.44	2.41	2.26	0.37	0.48	-0.99	1.77	999.99	0.00	999.99	1.77	1.15
GR2		2.09	2.15	2.11	2.06	0.54	0.63	0.00	1.68	0.53	0.00	0.53	1.68	1.25

GR1: Growth Rate from 2022 to 2050 GR2: Growth Rate from 2023 to 2050

Report created 7/07/2023 12:48:30 pm

This page intentionally left blank

FAA Forecast Approval
February 20, 2024

This page intentionally left blank

U.S. Department
of Transportation
**Federal Aviation
Administration**

Detroit Airports District Office
Metro Airport Center
11677 South Wayne Road, Ste. 107
Romulus, MI 48174

February 20, 2024

Mr. Mark Kelby, Airport Planner
Columbus Regional Airport Authority
John Glenn International Airport
4600 International Gateway
Columbus, OH 43219

FAA Review & Approval for Part 150 Study at John Glenn International Airport (CMH) – AIP Grant # 3-39-0025-0103-2023

Dear Mr. Kelby:

The Federal Aviation Administration (FAA) Detroit Airports District Office (DET ADO) has completed a review of the John Glenn Columbus International Airport – Part 150 Study Forecast of Aviation Activity, received by this office via email on December 20, 2023 from Chris Sandfoss, L&B.

The forecasts were developed for the preparation of the Part 150 Noise Study being undertaken by the sponsor. The FAA approves these forecasts for the development of the Noise Exposure Maps (NEMs). The FAA approval is based on Exhibit 1 – *Comparison of Aircraft Operations from the 2019 Forecast to the 2023 Terminal Area Forecast* and the Fleet Mix described in Table 1 and 2. Based on our approval we also offer the following:

- The comparison of the airport sponsor forecast and the FAA Terminal Area Forecast (TAF) are within the 10 percent and 15 percent allowance for the 5- and 10-year planning horizons. This is based on both the TAF January 2022 and recently released TAF January 2024. A copy of both the 2022 and 2023 TAF should be included with the final documents.
- The forecasts are based on current data and appropriate methodologies.

The approval of the forecast does not automatically constitute a commitment on the part of the United States to participate in any development recommended in the Part 150 Study. All future development must be justified by current activity levels at the time of proposed implementation. Further, the approved forecasts may be subject to

additional analysis or the FAA may request a sensitivity analysis if at time of submittal of the Noise Exposure Maps (NEMs) there have been any significant changes at the airports (increase or decline) prior to the FAA's processing and acceptance of the NEMs and approval of the Noise Compatibility Program (NCP).

If you have any questions about this forecast approval, please contact me at (734) 229-2958 or Katherine.S.Delaney@faa.gov.

Sincerely,

Katherine S. Delaney
Lead Community Planner

Attachment:
2023 TAF (CMH)

APO TERMINAL AREA FORECAST DETAIL REPORT
Forecast Issued January 2024

CMH

	AIRCRAFT OPERATIONS														
	Enplanements			Itinerant Operations					Local Operations						
Fiscal Year	**Air Carrier**	**Commuter**	**Total**	**Air Carrier**	**Air Taxi & Commuter**	**GA**	**Military**	**Total**	**Civil**	**Military**	**Total**	**Total Ops**	**Total Tracon Ops**	**Based Aircraft**
REGION:AGL **STATE:**OH **LOCID:**CMH														
CITY:COLUMBUS **AIRPORT:**JOHN GLENN COLUMBUS INTL														
1990	1,680,600	134,300	1,814,900	44,010	42,305	54,839	1,884	143,038	26,534	1,181	27,715	170,753	326,378	173
1991	1,604,675	117,434	1,722,109	59,379	57,755	65,191	1,761	184,086	28,479	1,158	29,637	213,723	316,251	181
1992	2,068,290	136,259	2,204,549	74,081	55,814	61,223	2,780	193,898	29,340	1,360	30,700	224,598	323,273	181
1993	2,301,762	155,989	2,457,751	81,207	51,570	55,624	1,874	190,275	26,184	590	26,774	217,049	317,993	181
1994	2,563,152	214,922	2,778,074	87,888	62,112	50,833	1,474	202,307	20,874	452	21,326	223,633	327,515	161
1995	2,589,662	215,624	2,805,286	75,360	59,592	43,173	1,097	179,222	24,507	371	24,878	204,100	329,466	155
1996	2,920,507	209,575	3,130,082	80,757	63,344	40,636	722	185,459	25,624	351	25,975	211,434	307,466	124
1997	3,176,484	197,622	3,374,106	87,587	66,601	39,877	387	194,452	18,698	98	18,796	213,248	319,382	83
1998	3,023,941	207,624	3,231,565	84,170	67,802	46,706	588	199,266	28,398	198	28,596	227,862	345,597	83
1999	2,949,266	359,618	3,308,884	77,267	79,762	56,320	572	213,921	14,562	491	15,053	228,974	377,011	70
2000	2,961,618	486,010	3,447,628	77,322	91,869	54,696	1,725	225,612	9,723	203	9,926	235,538	395,822	70
2001	2,768,754	643,630	3,412,384	69,366	109,503	53,881	1,702	234,452	8,687	64	8,751	243,203	386,753	91
2002	2,390,215	814,555	3,204,770	58,333	125,933	58,874	1,531	244,671	8,584	70	8,654	253,325	407,187	91
2003	2,201,178	947,925	3,149,103	47,138	124,929	61,269	1,191	234,527	6,138	0	6,138	240,665	382,028	91
2004	2,066,582	955,001	3,021,583	44,123	117,950	62,017	1,402	225,492	3,804	29	3,833	229,325	374,416	230
2005	2,094,283	1,168,778	3,263,061	50,135	107,238	57,944	877	216,194	6,323	14	6,337	222,531	388,563	230
2006	1,884,820	1,389,578	3,274,398	49,262	81,982	54,086	1,592	186,922	6,073	526	6,599	193,521	379,881	93
2007	2,240,292	1,485,490	3,725,782	50,294	73,957	42,273	1,643	168,167	6,241	208	6,449	174,616	349,502	93
2008	2,076,236	1,417,503	3,493,739	59,638	66,151	34,240	1,723	161,752	3,335	64	3,399	165,151	310,465	93
2009	1,766,309	1,336,054	3,102,363	55,690	57,816	30,868	2,497	146,871	0	0	0	146,871	238,248	93
2010	1,710,886	1,414,401	3,125,287	49,579	59,991	27,139	1,424	138,133	0	0	0	138,133	245,537	93
2011	1,731,460	1,413,843	3,145,303	54,776	56,990	23,753	405	135,924	0	0	0	135,924	288,326	83

2012	1,760,219	1,350,529	3,110,748	58,410	49,482	23,917	450	132,259	0	0	0	132,259	357,509	83
2013	1,723,751	1,329,508	3,053,259	57,723	45,852	22,012	600	126,187	985	0	985	127,172	339,302	76
2014	1,780,149	1,322,362	3,102,511	59,125	44,415	20,913	606	125,059	11	0	11	125,070	326,060	76
2015	1,911,281	1,318,617	3,229,898	65,164	38,778	20,573	535	125,050	0	0	0	125,050	314,573	76
2016	2,178,712	1,343,711	3,522,423	71,934	36,481	19,974	493	128,882	0	0	0	128,882	325,673	74
2017	2,337,996	1,301,543	3,639,539	78,945	29,395	19,896	511	128,747	7	0	7	128,754	329,420	78
2018	2,486,446	1,405,467	3,891,913	81,737	30,143	20,542	519	132,941	0	0	0	132,941	330,611	78
2019	2,752,180	1,372,075	4,124,255	88,343	26,019	20,219	738	135,319	0	0	0	135,319	335,346	73

APO TERMINAL AREA FORECAST DETAIL REPORT
Forecast Issued January 2024

CMH

	AIRCRAFT OPERATIONS													
	Enplanements			Itinerant Operations					Local Operations					
Fiscal Year	**Air Carrier**	**Commuter**	**Total**	**Air Carrier**	**Air Taxi & Commuter**	**GA**	**Military**	**Total**	**Civil**	**Military**	**Total**	**Total Ops**	**Total Tracon Ops**	**Based Aircraft**
2020	1,505,365	777,465	2,282,830	63,164	17,478	14,900	408	95,950	28	0	28	95,978	271,912	90
2021	1,589,430	746,844	2,336,274	56,561	13,653	16,896	382	87,492	22	0	22	87,514	278,018	90
2022	2,456,961	1,089,669	3,546,630	78,225	17,029	18,999	351	114,604	0	0	0	114,604	321,361	88
2023*	2,952,315	1,027,922	3,980,237	84,362	16,531	17,767	337	118,997	26	0	26	119,023	323,739	89
2024*	3,295,489	962,458	4,257,947	91,079	10,042	20,045	337	121,503	30	0	30	121,533	332,032	89
2025*	3,484,923	1,020,282	4,505,205	96,582	12,487	21,533	337	130,939	30	0	30	130,969	348,973	89
2026*	3,551,736	1,040,149	4,591,885	99,188	11,812	21,576	337	132,913	30	0	30	132,943	350,032	89
2027*	3,623,364	1,061,382	4,684,746	101,178	11,683	21,619	337	134,817	30	0	30	134,847	352,732	89
2028*	3,697,065	1,083,140	4,780,205	102,875	11,801	21,661	337	136,674	30	0	30	136,704	356,102	89
2029*	3,767,658	1,104,005	4,871,663	104,473	11,920	21,704	337	138,434	30	0	30	138,464	359,323	89
2030*	3,837,597	1,124,691	4,962,288	106,039	12,040	21,747	337	140,163	30	0	30	140,193	362,508	89
2031*	3,906,872	1,145,156	5,052,028	107,576	12,161	21,790	337	141,864	30	0	30	141,894	365,663	89
2032*	3,977,031	1,165,886	5,142,917	109,124	12,283	21,833	337	143,577	30	0	30	143,607	368,851	89
2033*	4,047,344	1,186,639	5,233,983	110,662	12,406	21,877	337	145,282	30	0	30	145,312	372,034	89
2034*	4,118,413	1,207,589	5,326,002	112,207	12,531	21,920	337	146,995	30	0	30	147,025	375,230	89

2035*	4,192,936	1,229,533	5,422,469	113,834	12,657	21,963	337	148,791	30	0	30	148,821	378,556	89
2036*	4,269,653	1,252,105	5,521,758	115,505	12,784	22,007	337	150,633	30	0	30	150,663	381,968	89
2037*	4,347,165	1,274,853	5,622,018	117,182	12,912	22,050	337	152,481	30	0	30	152,511	385,396	89
2038*	4,424,195	1,297,482	5,721,677	118,834	13,042	22,094	337	154,307	30	0	30	154,337	388,805	89
2039*	4,502,713	1,320,525	5,823,238	120,511	13,173	22,138	337	156,159	30	0	30	156,189	392,263	89
2040*	4,582,973	1,344,071	5,927,044	122,219	13,305	22,181	337	158,042	30	0	30	158,072	395,786	89
2041*	4,661,849	1,367,163	6,029,012	123,879	13,439	22,225	337	159,880	30	0	30	159,910	399,251	89
2042*	4,743,498	1,391,095	6,134,593	125,599	13,574	22,269	337	161,779	30	0	30	161,809	402,822	89
2043*	4,825,983	1,415,233	6,241,216	127,328	13,710	22,313	337	163,688	30	0	30	163,718	406,421	89
2044*	4,908,622	1,439,409	6,348,031	129,050	13,848	22,358	337	165,593	30	0	30	165,623	410,020	89
2045*	4,991,934	1,463,764	6,455,698	130,779	13,987	22,402	337	167,505	30	0	30	167,535	413,637	89
2046*	5,075,145	1,488,093	6,563,238	132,493	14,128	22,446	337	169,404	30	0	30	169,434	417,253	89
2047*	5,158,801	1,512,542	6,671,343	134,207	14,270	22,491	337	171,305	30	0	30	171,335	420,891	89
2048*	5,242,831	1,537,097	6,779,928	135,918	14,413	22,535	337	173,203	30	0	30	173,233	424,540	89
2049*	5,329,100	1,562,285	6,891,385	137,676	14,558	22,580	337	175,151	30	0	30	175,181	428,270	89

APO TERMINAL AREA FORECAST DETAIL REPORT
Forecast Issued January 2024

CMH

	AIRCRAFT OPERATIONS													
	Enplanements			Itinerant Operations					Local Operations					
Fiscal Year	**Air Carrier**	**Commuter**	**Total**	**Air Carrier**	**Air Taxi & Commuter**	**GA**	**Military**	**Total**	**Civil**	**Military**	**Total**	**Total Ops**	**Total Tracon Ops**	**Based Aircraft**
2050*	5,418,044	1,588,253	7,006,297	139,491	14,704	22,624	337	177,156	30	0	30	177,186	432,095	89

This page intentionally left blank