

Chapter 4 Noise Compatibility Program

The culmination of the 14 Code of Federal Regulations (CFR) Part 150 planning process is the development of a set of measures designed to enhance the compatibility between an airport and its surrounding environs. This chapter presents previous measures from the 2007 Part 150 program that are either being continued as is, continued with modifications, or are being withdrawn. Collectively these measures are referred to as the 2020 Noise Compatibility Program (2020 NCP). These include noise abatement, land use mitigation, and program management measures designed to reduce or mitigate the impact of aircraft noise upon the surrounding community.

4.1 Noise Compatibility Program Measures

The NCP measures recommended for implementation for the John Glenn Columbus International Airport (CMH or Airport) have resulted from the planning process described throughout this document. **Appendix E, Noise Abatement Alternatives**, and **Appendix F, Land Use Alternatives**, include a list of all alternatives assessed for this 2020 NCP. **Appendix G, Public Involvement**, contains meeting materials and summaries of the Technical Advisory Committee (TAC) meetings and public meetings, that included discussion of NCP measures.

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

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

Where helpful for clarification, an exhibit associated with the measure is provided. **Table 4-1** summarizes the measures included in 2020 NCP for CMH.

Following the plates for individual program measures is an exhibit showing the NCP map which incorporates each of the recommended program measures, as well as a description of the population, housing, and noise-sensitive land use impacts associated with its full implementation by the year 2025. The final section of this chapter summarizes the anticipated costs of implementing the 2020 NCP and provides an implementation schedule for the program. As discussed previously, the approval of the 2020 NCP by the Federal Aviation Administration (FAA) does not commit the FAA or the Columbus Regional Airport Authority (CRAA) to the costs or the implementation schedule listed in this document. This information is provided here as a planning tool to assist the implementation of the NCP.

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

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Table 4-1 2020 Noise Compatibility Program Recommendations

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

Table 4-1 2020 Noise Compatibility Program Recommendations, *(continued)*

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

Table 4-1 2020 Noise Compatibility Program Recommendations, *(continued)*

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

Table 4-1 2020 Noise Compatibility Program Recommendations, *(continued)*

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

Table 4-1 2020 Noise Compatibility Program Recommendations, *(continued)*

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

Table 4-1 2020 Noise Compatibility Program Recommendations, *(continued)*

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

Table 4-1 2020 Noise Compatibility Program Recommendations, *(continued)*

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

Table 4-1 2020 Noise Compatibility Program Recommendations, *(continued)*

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

Table 4-1 2020 Noise Compatibility Program Recommendations, *(continued)*

| Measure | Responsible Party | Cost to Airport | Cost to Local Governments | Cost to Users | Implementation Status |
|--|-------------------|--|---------------------------|---------------|--|
| Program Management Recommendations <i>(continued)</i> | | | | | |
| PM-4: Maintain the noise and flight track monitoring system and expand and upgrade the system as necessary. | CRAA | Minimal cost for staff time | None | None | Implemented - In 2014, four additional permanent noise monitors (NMTs) were installed. The other existing 12 NMTs were upgraded with newer equipment. The CRAA continues to monitor the operation of the system and receives ongoing software updates. |
| PM-5: Routinely update the noise contours and periodically update the noise program | CRAA, FAA | NEMs (\$500,000) NEMs and NCP (\$1,500,000) | None | None | Ongoing – this 2020 NCP update represents the continuation of this measure. CRAA will continue to monitor and provide for periodic updates. |
| PM-6: Establish a land use compatibility task force which meets periodically to discuss issues relevant to airport noise compatibility planning | CRAA | Cost for staff time (dependent upon frequency of meetings) | None | None | Previously implemented but no longer active. Could be reestablished if determined to be necessary. |

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Noise Compatibility Program Measure: NA-1

Exhibit: 4-1

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

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

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

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

Responsible Implementing Parties: Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps: No additional steps.

Costs: No additional costs.

Schedule: This measure is currently implemented.

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

Noise Compatibility Program Measure: NA-2

Exhibit: 4-1

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

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

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

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

Responsible Implementing Parties: Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

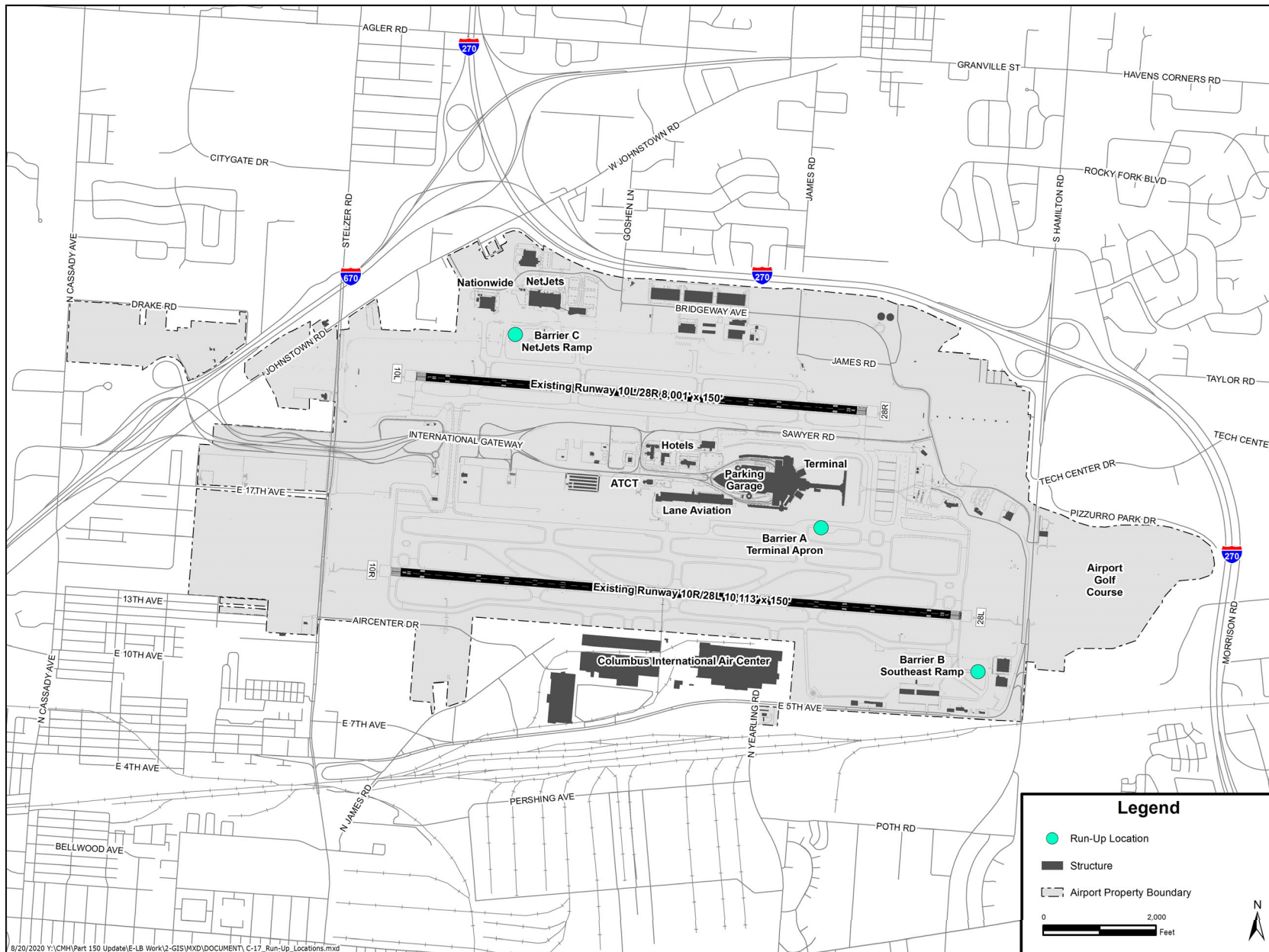
Steps: No additional steps.

Costs: No additional costs.

Schedule: This measure is complete

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

Exhibit 4-1 Aircraft Engine Run-Up Locations



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Noise Compatibility Program Measure: NA-3

Exhibit: N/A

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

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

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

Steps: No additional steps.

Costs: No additional costs.

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

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

Noise Compatibility Program Measure: NA-4**Exhibit: N/A**

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

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

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

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

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

Noise Compatibility Program Measure: NA-6

Exhibit: 4-2

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

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

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

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

Responsible Implementing Parties: FAA

Implementation Steps, Costs, and Phasing:

Steps: n/a

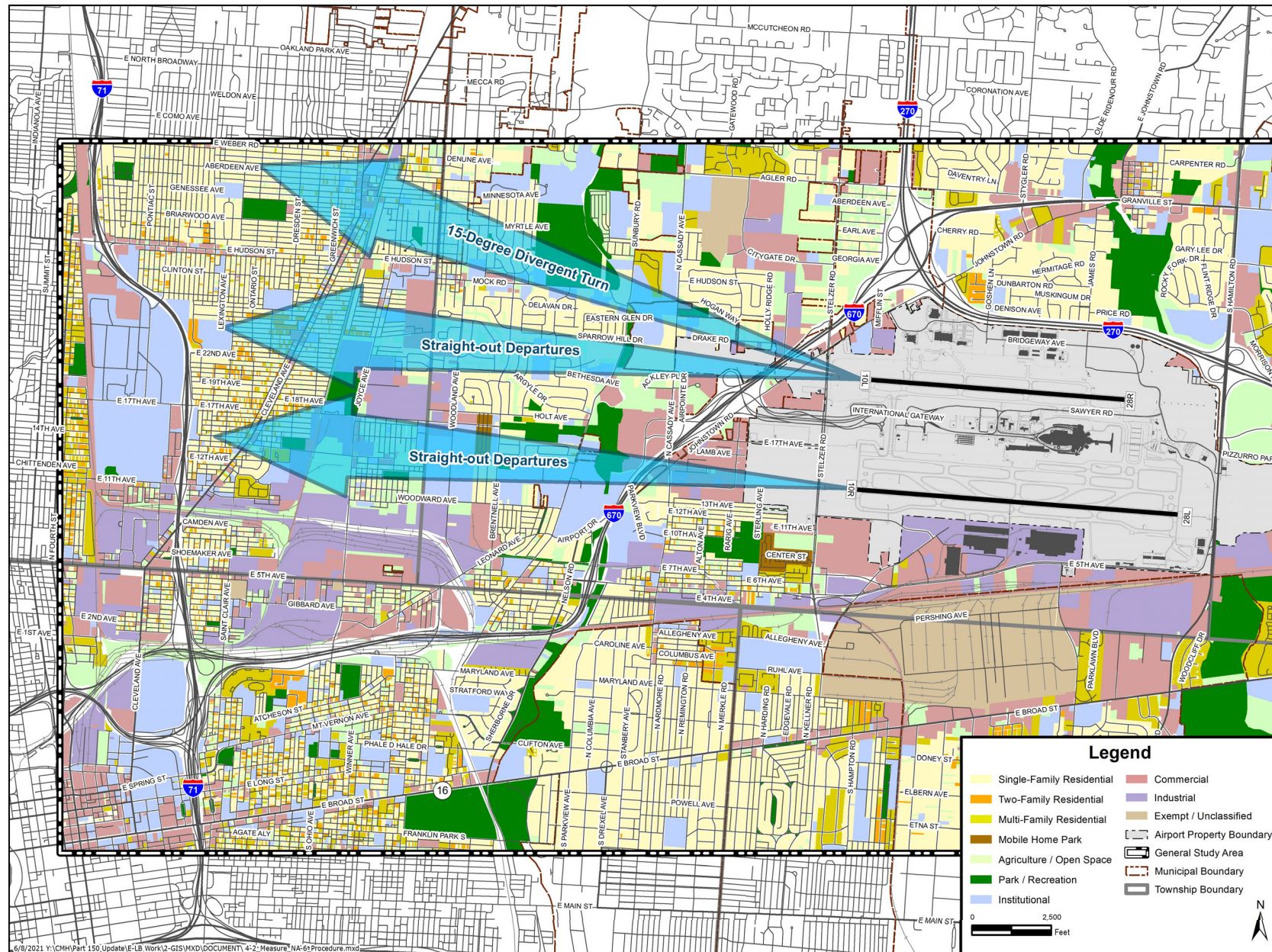
Costs: n/a

Schedule: n/a

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

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Exhibit 4-2 Measure NA-6 Flight Procedure



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Noise Compatibility Program Measure: NA-7

Exhibit: N/A

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

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

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

The FAA is currently in the process of implementing Performance Based Navigation (PBN) procedures at CMH.

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

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

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

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

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

Schedule: n/a

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

Noise Compatibility Program Measure: NA-8**Exhibit: N/A****Description:** Withdraw measure to Construct a noise berm/wall on airport property along East 13th Avenue.

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

Relationship to 2007 NCP: Withdraws approved measure NA-8 of 2007 Part 150 NCP.**Land Use Compatibility Improvement:** n/a**Responsible Implementing Parties:** n/a**Implementation Steps, Costs, and Phasing:**Steps: n/aCosts: n/aSchedule: n/a**Effects on Other Programs/Measures:** n/a

Noise Compatibility Program Measure: NA-9

Exhibit: N/A

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

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

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

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

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

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: n/a

Costs: n/a

Schedule: n/a

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

Noise Compatibility Program Measure: LU-1**Exhibit: 4-3**

Description: Offer a program for noise insulation of noncompatible structures for noncompatible residences within the 65+ DNL contour of the Future (2025) Noise Compatibility Program (NCP) condition, in exchange for an avigation easement.

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

This modification to the measure would revise the sound insulation program boundary to be based on the 65 DNL of the Future (2025) Noise Compatibility Program (NCP) Noise Exposure Contour as shown in **Exhibit 4-3**. There are two housing units that are located within the 65+ DNL of the Future (2025) NCP Noise Exposure Contour. One housing unit is located in a commercial area on Taylor Station Road. The owner of this housing unit was offered sound insulation and did not respond or declined the offer. The other housing unit is located on Stockton Trail Way. The housing units in this area along Stockton Trail Way were constructed after the Noise Exposure Maps from the 2007 Part 150 Study were published. It is expected that these homes would have been constructed to meet the recommended interior sound attenuation guidelines and would already reduce noise to below acceptable levels. Therefore, these housing units are considered compatible and no housing units are recommended for sound insulation at this time. This measure is being continued in the event noise levels increase in the future and land uses would become newly eligible.

Relationship to 2007 NCP: Continues approved measure LU-1 of 2007 Part 150 NCP, revised based on the 65 DNL noise contour for the Future (2025) NCP Noise Exposure Contour.

Land Use Compatibility Improvement: No new housing units are located within the 65 DNL of the Future (2025) NCP Noise Exposure Contour.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

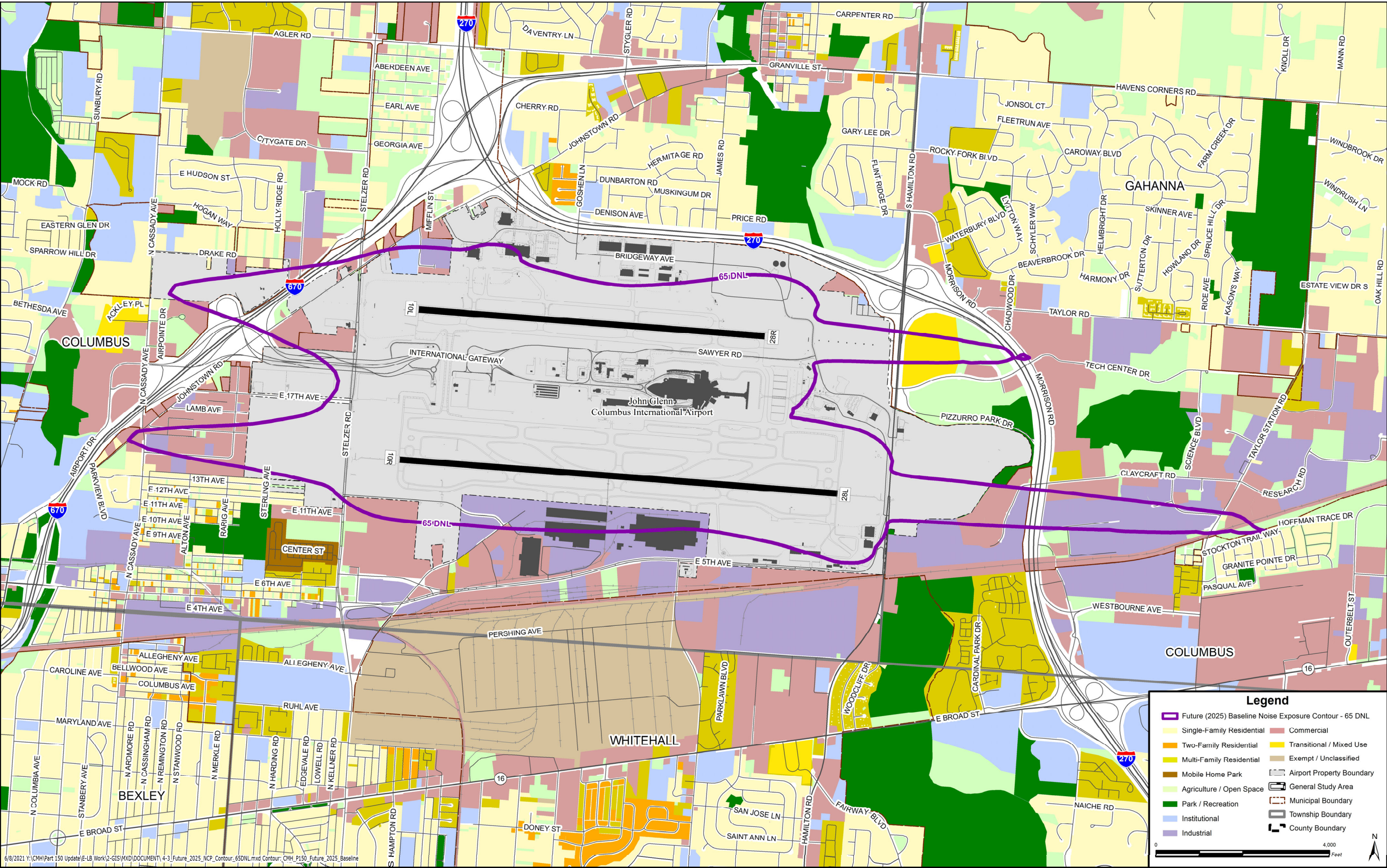
Steps: No eligible residences are located in the 65+ DNL of the Future (2025) NCP therefore no steps are needed at this time

Costs: n/a

Schedule: n/a

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

Exhibit 4-3 Future (2025) Noise Exposure Contour – 65 DNL



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Noise Compatibility Program Measure: LU-2

Exhibit: 4-3

Description: Offer a program for noise insulation of noncompatible structures for noncompatible churches within the 65+ DNL contour of the Future (2025) Noise Compatibility Program (NCP) condition in exchange for an aviation easement.

Background and Intent: As part of the 1999 Part 150 Update two churches were identified within the 65 DNL of the Future (2003) Noise Exposure Contour: Mount Judia Church of Old Regular Baptists of Jesus Christ and Wonderland Community Church. The Mount Judia Church of Old Regular Baptists of Jesus Christ was contacted and advised that required paper work would need to be submitted to the IRS to confirm their church status with the IRS. To date, the CAAA has not heard back from the church that the paperwork has been filed. The church would not be located in the 65 DNL of the Future (2026) NCP noise contour. The CAAA currently has an aviation easement on the Wonderland Community Church, making the land use compatible. Neither of these church properties are located within the 65 DNL of the Future (2025) NCP noise contour and no additional churches have been identified within the 65 DNL of the Future (2025) NCP noise contour. This measure is being continued in the event noise levels increase in the future and land uses would become newly eligible.

Relationship to 2007 NCP: Continues approved measure LU-2 of 2007 Part 150 NCP, revised based on the 65 DNL noise contour for the Future (2025) NCP.

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

Responsible Implementing Parties: CAAA

Implementation Steps, Costs, and Phasing:

Steps: No churches are located in the 65+ DNL of the Future (2025) NCP therefore no steps are needed at this time.

Costs: None

Schedule: n/a

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

Noise Compatibility Program Measure: LU-3**Exhibit: N/A**

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

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

Costs: Minimal cost to the CRAA and local governments.

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

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

Noise Compatibility Program Measure: LU-4

Exhibit: N/A

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

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

Costs: Minimal cost to the CRAA and local governments.

Schedule: Can be implemented immediately.

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

Noise Compatibility Program Measure: LU-5**Exhibit: N/A**

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

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

Costs: Minimal cost to the CRAA and local governments.

Schedule: This is an ongoing measure that will continue.

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

Noise Compatibility Program Measure: LU-6

Exhibit: N/A

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

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

Costs: Minimal cost to the CRAA and local governments.

Schedule: Can be implemented immediately.

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

Noise Compatibility Program Measure: LU-7**Exhibit: N/A**

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

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

Costs: Minimal cost to the CRAA and local governments.

Schedule: Can be implemented immediately.

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

Noise Compatibility Program Measure: LU-8

Exhibit: N/A

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

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

Costs: Minimal cost to the CRAA and local governments.

Schedule: Can be implemented immediately.

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

Noise Compatibility Program Measure: LU-9**Exhibit: N/A**

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

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

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

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

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

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

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

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

Implementation Steps, Costs, and Phasing:Steps:

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

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

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

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

Noise Compatibility Program Measure: LU-10

Exhibit: N/A

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

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

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

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

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

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

Costs: Approximately \$10,000 annually for advertising

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

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

Noise Compatibility Program Measure: LU-12

Exhibit: 4-4

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

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

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

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

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

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

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

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

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

Background and Intent, *continued*:

Boundary C: Community Based Boundary:

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

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

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

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

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

Implementation Steps, Costs, and Phasing:

Steps:

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

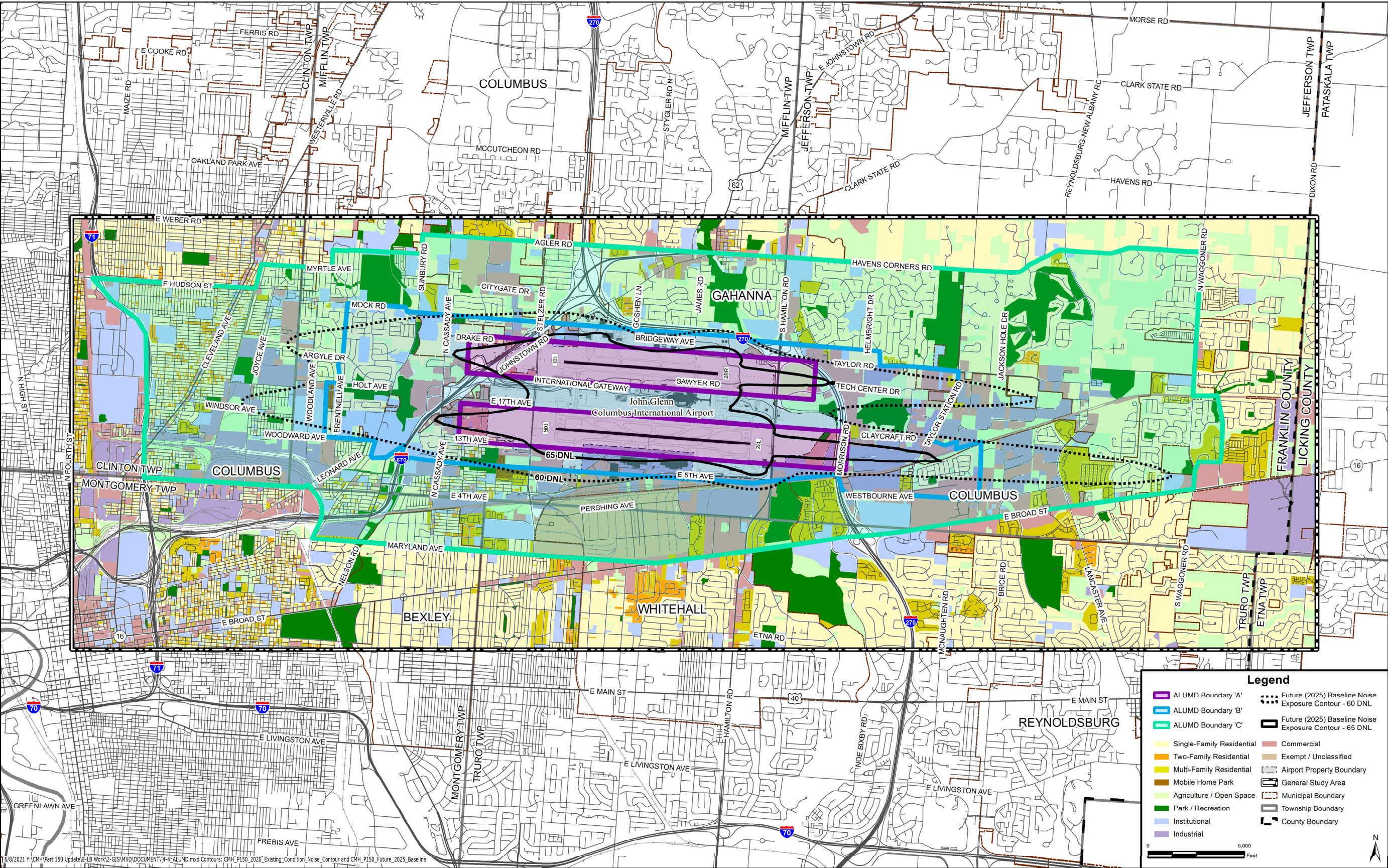
Costs: The costs of implementing this measure will include contracting with MORPC (or similar agency) to coordinate and facilitate the implementation of this measure. There will also be administrative costs of the CRAA and local jurisdictions. Total cost estimated at approximately \$55,000.

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

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

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



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Noise Compatibility Program Measure: PM-1

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

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

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

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

Responsible Implementing Parties: CRAA and FAA

Implementation Steps, Costs, and Phasing:

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

Costs: No additional costs.

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

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

Noise Compatibility Program Measure: PM-2

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

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

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

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

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: No additional steps.

Costs: Minimal cost for staff time to manage the program

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

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

Noise Compatibility Program Measure: PM-3

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

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

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

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

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

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

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

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

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

Noise Compatibility Program Measure: PM-4

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

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

These enhancements included:

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

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

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

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

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

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

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

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

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

Noise Compatibility Program Measure: PM-5

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

Background and Intent: The NEMs are likely to become outdated and will need to be updated periodically. The NEMs should be updated every two to three years to consider changes in operating levels and patterns, as well as updates of the noise modeling software. In addition, the NEMs should be updated in accordance with the Federal Aviation Administration's (FAA's) guidelines for determining what constitutes a potentially significant increase in operations (17 percent increase in the area impacted by 65+ DNL). The NCP should be updated every five years, or as necessary, to reflect larger changes in the nature of aircraft noise surrounding the Airport. Should any development, such as runway realignments or significant modifications to ground facilities, enlarge the area of incompatible use exposed to aircraft noise above 65 Day-Night Average Sound Level (DNL), the NCP should be updated prior to the implementation of those improvements. A full update may not be required, but rather, a targeted assessment of the changes occasioned by specific development projects may suffice to bring the NCP to conformity and to qualify additional areas for NCP programs, if appropriate. Due to the proposed replacement runway, the NEM will be updated at a minimum 18 to 20 months after the opening of the proposed runway.

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

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

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps:

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

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

Schedule: Review operating levels periodically for significant changes. Conduct NEM update when changes to conditions warrant or by 2030/2031, with NCP update as needed.

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

Noise Compatibility Program Measure: PM-6

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

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

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

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

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

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

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

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

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

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

Effects on Other Programs/Measures: None

4.2 Noise Compatibility Program Map

No new noise abatement measures are proposed in this NCP update that would change the pattern of aircraft noise at CMH. As noted in this chapter, existing noise abatement measures are recommended to be continued. **Exhibit 4-5, *Future (2025) NEM/NCP Noise Exposure Contour***, constitutes the official NEM for the year 2025, and is reflective of implementation of all of the previously-recommended noise abatement measures.

Table 4-2 presents the noise impacts for the Future (2025) NEM/NCP noise exposure contour. There are two housing units and one noise-sensitive facility within the Future (2025) NEM/NCP noise exposure contour. All housing units have been sound insulated or will be eligible for sound insulation with the approval of the NCP.

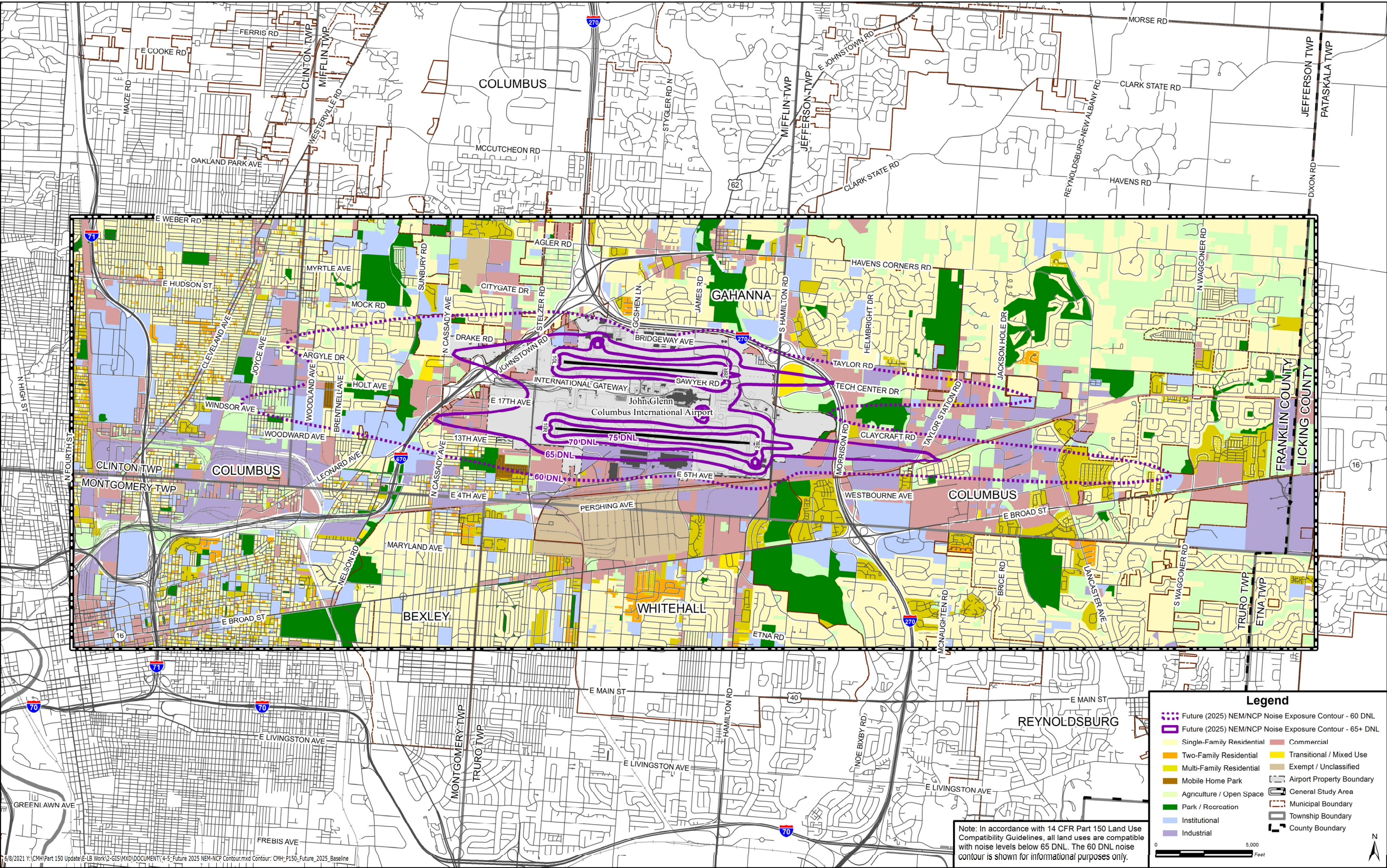
Table 4-2 Future (2025) NEM/NCP Housing, Population, and Noise-Sensitive Facilities Incompatibilities

| Category | Future (2025) NEM/NCP |
|-----------------------------------|-----------------------|
| Housing Units | |
| 65 – 70 DNL | 2 |
| 70 – 75 DNL | 0 |
| 75+ DNL | 0 |
| 65+ DNL | 2 |
| Population | |
| 65 – 70 DNL | 5 |
| 70 – 75 DNL | 0 |
| 75+ DNL | 0 |
| 65+ DNL | 5 |
| Noise Sensitive Facilities | |
| 65 – 70 DNL | 1 |
| 70 – 75 DNL | 0 |
| 75+ DNL | 0 |
| 65+ DNL | 1 |

Source: Landrum & Brown, 2020.

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Exhibit 4-5 Future (2025) NEM/NCP Noise Exposure Contour



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4.3 Noise Compatibility Program Costs

The CRAA, supplemented by funding from the FAA, will incur the direct costs associated with the recommended NCP measures. Costs for continuation of the program have been estimated in 2020 dollars and are presented in Table 4-3. These costs are separated between costs to the CRAA, costs to local governments, and costs to users (e.g. airlines, corporate aviation, general aviation) if any, with CRAA carrying the vast majority of responsibility for the costs of the program measures. Where applicable, Table 4-3 notes if costs are annual or one-time expenses. The CRAA funded mitigation actions recommended for implementation are eligible for Federal matching funds amounting to approximately 80 percent of the total program cost. The costs of each individual measure are detailed earlier in this chapter.

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

Table 4-3 NCP Implementation Costs

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

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

Source: Landrum & Brown, 2020.

4.4 Implementation Schedule

As shown in Table 4-1, the existing noise abatement measures (NA-1 through NA-9) are from the previously approved 2007 Part 150 NCP and can continue uninterrupted. The existing corrective land use mitigation measures (LU-1 and LU-2) are previously approved; although, no land uses have been identified for implementation. The preventive land use measures (LU-3, LU-4, LU-5, LU-6, LU-7, LU-8, LU-9, LU-10 and LU-12) can be implemented immediately. Program management measures PM-1, PM-2, PM-3, PM-4, and PM-6 are continuations of previous measures and can be implemented immediately. Measure PM-5 is a continuation of a previously-approved measure and can be implemented at any time with a full update to the NEMs or NEMs/NCP expected to occur by the year 2030 or 2031.