



## Chapter Seven NOISE COMPATIBILITY PLAN

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# Noise Compatibility Program

The F.A.R. Part 150 Noise Compatibility Program for Georgetown Municipal Airport (GTU) includes measures to abate aircraft noise, control land development, mitigate the impact of noise on non-compatible land uses, and implement and update the program. F.A.R. Part 150 requires that the program apply to a period of no less than five years into the future, although it may apply to a longer period if the sponsor so desires. This Noise Compatibility Program (NCP) has been developed based on a planning period through the year 2008.

The objective of the noise compatibility planning process has been to improve the compatibility between aircraft operations and noise-sensitive land uses in the area, while allowing the Airport to continue to serve its role in the community, state, and nation. The NCP includes four elements aimed to satisfy this objective.



- The **Noise Abatement Element** includes noise abatement measures selected from the alternatives evaluated in Chapter Five, Noise Abatement Alternatives.
- The **Noise Mitigation Element** includes measures to mitigate or reduce the impact of aircraft noise on existing noise-sensitive land uses within the Airport noise contours. Potential mitigation alternatives were evaluated in Chapter Six, Land Use Alternatives.
- The **Land Use Planning Element** includes recommended planning policies and land use

regulations for the City of Georgetown, which have been selected from the measures evaluated in Chapter Six, Land Use Alternatives.

- The **Program Management Element** includes procedures and documents for implementing the recommended noise abatement, land use planning, mitigation measures, monitoring the progress of the program, and updating the NCP.

The recommendations of the NCP are summarized in **Table 7C** at the end of the chapter. That table includes a brief description of each recommended measure, the entity responsible for implementing each measure, the estimated cost of each measure, the proposed timing for implementation of the measure, and potential sources of funding.

### ***NOISE ABATEMENT AND LAND USE MEASURES ELIMINATED FROM CONSIDERATION***

Several noise abatement and land use alternatives were evaluated in this study. These were discussed with the Planning Advisory Committee (PAC), local citizens, and government officials. The following paragraphs summarize those alternatives, presented for further discussion within Chapters Five and Six, which were eliminated from further

consideration based upon comments from the PAC and additional study.

Five noise abatement alternatives were considered within Chapter Five. Further evaluation of these alternatives resulted in the elimination of one of these alternatives. Alternative Three, establishing Visual Arrival Routes for Runway 18-36, was eliminated as it shifted and concentrated overflight noise from one residential area to another.

Chapter Six considered nine land use management alternatives for further consideration. Five of these alternatives were eliminated due to recent changes to the *Georgetown General Plan* and zoning ordinance. These five alternatives include updating the general plan land use designations around the Airport to reflect non-noise-sensitive land uses, creating an industrial zone within the unincorporated areas east of the Airport, amending the building codes to incorporate prescriptive noise insulation standards, and enact fair disclosure within the Airport planning area.

### ***NOISE ABATEMENT ELEMENT***

The recommended noise abatement measures are described in this section. They include existing measures to be retained and new measures which have been carried forward from Chapter Five.

## **EXISTING MEASURES TO BE RETAINED**

### **1. Encourage Departing Aircraft To Use Best Rate Of Climb (Vy).**

*Description.* The Airport's current "Fly Friendly" program encourages pilots to depart the airport using the best rate of climb (Vy). This procedure will allow aircraft to gain the greatest amount of altitude for a given duration of time. This will allow departing aircraft to overfly noise-sensitive areas at a higher altitude while traveling at a relatively quick rate of speed. This will reduce the overall level of the noise event on the ground.

*Implementation Actions.* This is an existing runway use program being used at Georgetown Municipal Airport. No additional implementation is necessary.

*Costs and Funding.* This is an existing measure currently utilized at Georgetown Municipal Airport; therefore, no additional cost will be incurred.

*Timing.* This is an existing program which is recommended to continue.

### **2. Encourage Aircraft to Begin Departure from the End of the Runway.**

*Description.* Georgetown Municipal Airport currently encourages departing aircraft to begin their takeoff roll at the end of the runway. This allows aircraft to use the maximum amount of runway

allowing them to gain additional altitude before leaving airport property. This will increase the distance between aircraft and noise-sensitive land uses during aircraft climb-out.

*Implementation Actions.* Since this is an existing policy, no specific implementation actions are necessary.

*Costs and Funding.* As an existing policy, no additional costs would be borne by the City of Georgetown.

*Timing.* This is an existing procedure which is recommended to continue.

### **3. Avoid Prolonged Run-Ups and Perform them as Near the Center of the Airport as Possible.**

*Description.* Georgetown Municipal Airport currently requests that aircraft maintenance run-ups be performed as near the center of the airfield as possible, and kept to a limited duration. As previously mentioned, depending on wind direction, run-ups are performed at two locations on the airfield. The first, and most commonly used, location is on a connecting taxiway between Taxiway C and Runway 18-36, located on the southern portion of the airfield. The second location is on Taxiway B adjacent to the airport's windsock.

*Implementation Actions.* Since this is an existing policy, no specific implementation actions are necessary.

*Costs and Funding.* As an existing policy, no additional costs would be borne by the City of Georgetown.

**Timing.** This is an existing procedure which is recommended to continue.

#### **4. Continue Use of NBAA Standard Noise Abatement Departure Procedures.**

Georgetown Municipal Airport should continue to actively encourage business jet operators to use the National Business Aviation Association (NBAA) Approach and Landing Procedures and Standard Noise Abatement Departure Procedures, or equivalent quiet-flying procedures developed by aircraft manufacturers. The NBAA standard procedure involves the management of thrust, flap settings, speed, and climb rate to reduce noise quickly after takeoff. (A complete description of the procedure is included in **Appendix E.**)

The NBAA has also published noise abatement approach procedures for jet aircraft. These include using minimum approach flap settings, maintaining minimum speed, and minimizing the use of reverse thrust after landing, consistent with safety. These procedures are also included in **Appendix E.**

**Implementation Actions.** Since this is an existing policy, no specific implementation actions are necessary. The airport should continue to reflect this policy in the "Fly Friendly" program, on future published pilot guides, signs, pilot mailings, and on the Georgetown Municipal Airport Internet Web Site.

**Costs and Funding.** As an existing policy, no additional costs would be borne by the airport users. The airport will likely incur normal administrative costs for informational efforts.

**Timing.** This is an existing policy which is recommended to continue.

#### **5. Maintain Right-hand Traffic Pattern on Runway 36.**

**Description.** Current noise abatement procedures have established a non-standard right-hand traffic pattern for aircraft using Runway 36. This right-hand pattern keeps the downwind leg over the Interstate 35 corridor instead of noise-sensitive development west of the airport. The use of a standard traffic pattern on Runway 36 would cause numerous overflights over residential areas.

**Implementation Actions.** Since this is an existing policy, no specific implementation actions are necessary. The airport should continue to reflect this policy in the "Fly Friendly" program, on future published pilot guides, signs, pilot mailings, and on the Georgetown Municipal Airport Internet Web Site.

**Costs and Funding.** As an existing policy, no additional costs would be borne by the airport users. The airport will likely incur normal administrative costs for informational efforts.

**Timing.** This is an existing policy which is recommended to continue.

## NEW MEASURES

Four noise abatement measures, currently not implemented, are recommended for implementation as listed below.

### 6. Designate Runway 11 as the Preferential Nighttime Runway for Departures.

**Description.** Propeller-powered aircraft weighing less than 12,500 pounds departing Georgetown Municipal Airport during nighttime hours (10:00 p.m. to 7:00 a.m.) should be encouraged to use Runway 11. The use of this procedure will allow aircraft to take advantage of the existing noise compatible corridor off the departure end of this runway. By removing some nighttime departures from Runways 18, 36, and 29, noise impacts and aircraft overflights would be reduced around the airport.

**Implementation Actions.** The Airport needs to request a field evaluation of this procedure to determine its effectiveness in mitigating noise concerns. Per *Paragraph 311n* of *FAA Order 1050.1E, Environmental Impacts: Policies and Procedures*, testing of arrival and departure procedures occurring below 3,000 feet aboveground level (AGL) can be categorically excluded from further National Environmental Protection Act (NEPA) review. Pending the results of the test, this procedure may be eligible for an

additional categorical exclusion under *Paragraph 311p* of *FAA Order 1050.1E*, which states that the establishment of new procedures that routinely route aircraft over non-noise sensitive areas can be categorically excluded.

**Costs and Funding.** Developing and evaluating this procedure would involve administrative costs for both the Airport and FAA.

**Timing.** This is recommended for implementation after FAA review and approval of the NCP and following any necessary environmental analysis/approvals. This is anticipated in 2005.

### 7. Runway 11 Noise Abatement Departure Turn.

**Description.** VFR aircraft departing Runway 11 should be encouraged to utilize Interstate Highway 35 as a viable noise compatible corridor. Aircraft with southern or western destinations would turn south, to follow the highway until reaching a position beyond concentrations of noise-sensitive development, before turning on-course. Aircraft with northern or eastern destinations would turn to follow Interstate 35 to the north. Once reaching a position over the intersection of Interstate 35 and State Highway 195, aircraft could proceed north or turn east on-course. By keeping aircraft along this corridor, the number of aircraft overflights of noise-sensitive areas would be reduced. The use of this procedure would be reserved to propeller-driven aircraft under 12,500 pounds due to the strength and weight limitations of Runway 11.

**Implementation Actions.** The Airport needs to request a field evaluation of this procedure to determine its effectiveness in mitigating noise concerns. Per *Paragraph 311n* of FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, testing of arrival and departure procedures occurring below 3,000 feet AGL can be categorically excluded from further National Environmental Protection Act (NEPA) review. Pending the results of the test, this procedure may be eligible for an additional categorical exclusion under *Paragraph 311p* of FAA Order 1050.1E, which states that the establishment of new procedures that routinely route aircraft over non-noise sensitive areas can be categorically excluded.

**Costs and Funding.** Developing and evaluating this procedure would involve administrative costs for both the Airport and FAA.

**Timing.** This is recommended for implementation after FAA review and approval of the NCP and following any necessary environmental analysis. This is anticipated in 2005.

## **8. Promote Use of AOPA Noise Awareness Steps by Light Single and Twin-engine Aircraft.**

**Description.** The Aircraft Owners and Pilots Association (AOPA) encourages quiet and neighborly flying by distributing generalized noise abatement procedures for use by propeller aircraft. These "Noise Awareness Steps" have recommend-

ations on how to fly the aircraft, as well as where to fly. Most of the steps provide guidance on pilot technique when maneuvering near noise-sensitive areas. The steps also encourage cooperation with the airport staff on noise abatement issues. These procedures are listed in **Appendix E** of this document.

It is not possible to predict how often these procedures would be used, so it is not possible to quantify their effects on noise. Nevertheless, any use of these procedures will help the overall noise conditions around the airport. Consequently, the airport should encourage their use.

**Implementation Actions.** The airport should promote this measure as part of its "Fly Friendly" policy. This measure would primarily be implemented by the airport proprietor. This could be accomplished through informational brochures, use of the Airport Facility Directory, and/or a Notice to Airmen (NOTAM).

**Costs and Funding.** No specific costs, other than production and printing of flyers or pilot guides.

**Timing.** This measure could be implemented upon FAA approval of the NCP.

## **9. Continue to Coordinate with Military Units on Helicopter Training Issues.**

**Description.** Military helicopters occasionally practice approaches at Georgetown Municipal Airport as they

are transiting the area. These units are usually unaware of the noise-sensitive land uses in the immediate vicinity of the airport. When possible, efforts should be made to identify the military unit and inform them of the "Fly Friendly" program and the noise-sensitive nature of the area surrounding Georgetown Municipal Airport.

**Implementation Actions.** Airport management should attempt to identify the military helicopter units practicing approaches at Georgetown Municipal Airport and inform them of the "Fly Friendly" program and area noise-sensitivities.

**Costs and Funding.** No specific costs, other than airport staff time to contact and educate military units on the "Fly Friendly" program.

**Timing.** This measure could be implemented upon FAA approval of the NCP.

#### **10. Orient New Buildings at the Airport to Shield Nearby Neighborhoods from Noise on the Ramp and Runways.**

**Description.** The construction of new hangars and other aviation-related buildings should be positioned to attenuate some of the noise of aircraft on the ground, especially while taxiing, engine running-up prior to departure, and immediately after landing for residential areas immediately adjacent to the airport.

**Implementation Actions.** Airport management should consider building orientation and location when reviewing development plans on the airport.

**Costs and Funding.** This will involve only administrative costs for the airport management as airport staff review future development plans.

**Timing.** This measure could be implemented upon FAA approval of the NCP.

#### **11. Build Engine Maintenance Run-up Enclosure.**

**Description.** An engine maintenance run-up enclosure should be built to attenuate noise from maintenance run-ups. The facility should be designed to accommodate the largest aircraft now conducting run-ups or those which may conceivably be expected in the future. This is anticipated to be the MU-2 aircraft. It is also suggested that the facility be designed to handle conventional corporate jets with the highest mounted engines.

A three-sided enclosure is envisioned which may possibly have doors on one end to fully enclose all four sides. An example of one potential run-up enclosure design is shown on Exhibit 5K in Chapter Five.

The City of Georgetown should establish policies governing the use of the run-up enclosure. All maintenance run-ups done at more than idle power should be required to use the facility.

**Implementation Actions.** This measure is the responsibility of the City of Georgetown. They should contract with an acoustical engineer to develop detailed design specifications and then open a request for proposals and cost quotations. After selecting a contractor, any required environmental reviews must be conducted before starting construction.

**Costs and Funding.** This is estimated to cost approximately \$250,000. It will be eligible for up to 95 percent funding through the noise set-aside of the Federal Airport Improvement Program (AIP). The local share must be provided through the Airport's capital budget. The City of Georgetown should consider establishing a user fee to maintain the run-up enclosure and recoup the initial development costs.

**Timing.** For planning purposes, this is projected for 2005. This allows time for design and any required environmental reviews.

## **NOISE MITIGATION ELEMENT**

The recommended noise mitigation measures for the vicinity of Georgetown Municipal Airport are presented on the following pages and summarized within **Table 7C**.

### **1. Acoustically Treat 27 Homes Within the 2008 65 DNL Noise Contour.**

**Description.** Twenty-seven (27) homes exist within the forecasted 2008 65

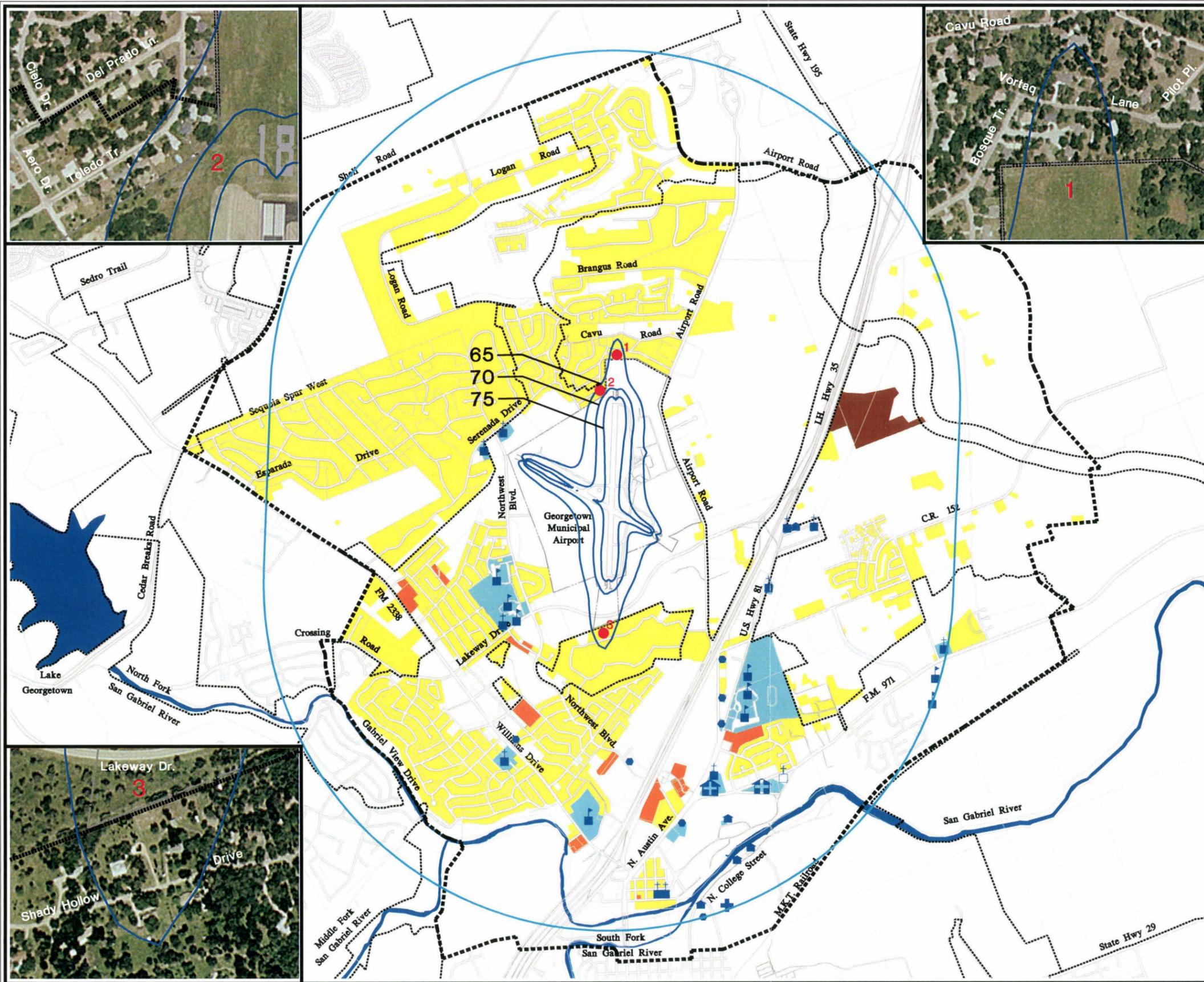
DNL noise contour. Consideration should be given to sound-insulating these homes. The locations of the homes are depicted on **Exhibit 7A**.

**Implementation Actions.** Following FAA approval of the NCP, the City of Georgetown will need to secure funding for a feasibility study and the acoustical treatment of the eligible homes. The City will then need to retain the services of acoustical engineers with expertise in sound insulation of existing structures. The engineers will need to coordinate with homeowners in undertaking inspections of the homes in order to develop a work scope and detailed specifications for the treatment program. The City, in association with the homeowners, can then request bids from qualified contractors.

**Costs and Funding.** It is not possible to reasonably estimate the cost of acoustically treating the homes without an on-site inspection by a qualified specialist. For planning purposes only, the costs of treating the homes are estimated at \$20,000 each, including contingencies. This is roughly based on the cost of acoustically treating homes near other airports.

This project would be eligible for FAA funding through the noise set-aside of the AIP. The acoustical treatment costs are eligible for up to 95 percent funding through the AIP. The local match will be provided through the Airport's capital budget.

**Timing.** These homes will be eligible for treatment after approval of the updated NCP by the FAA, expected in



**LEGEND**

- Detailed Land Use Study Area
- Municipal Boundary
- Airport Property
- Horizontal Surface/Airport Planning Area
- 2008 DNL Noise Exposure Contour, Significant Effect
- Sound Insulation Areas
- Residential Low Density
- Residential Medium Density
- Recreational Vehicle Park
- Noise Sensitive Institutions
- School
- Day Care Facility
- Community Center
- Residential Care Facility
- Place of Worship
- Cemetery

Source: Aerial Photography, dated April 4, 2001  
 Corrigan Consulting, Inc.  
 City of Georgetown Zoning Ordinance,  
 April 26, 2000.  
 Coffman Associates Analysis.



2005. The overall pace of the program will depend on the completion of a feasibility study and the amount of funding available.

## **LAND USE PLANNING ELEMENT**

Recommended land use planning measures are presented below and summarized in **Table 7C** at the end of this chapter.

### **1. Establish an Airport Influence Area (AIA) and Adopt the 2008 Noise Contours as a Basis for Noise Compatibility Planning.**

**Description.** In considering potential land use compatibility measures, it is necessary to define the areas within which those policies should apply. The challenge is to define the area within which the airport now exerts, and in the future may exert, a significant influence on local residents and potentially noise-sensitive land uses. Consideration should be given to utilizing the F.A.R. Part 77 horizontal surface as the boundary for the AIA. This boundary is depicted on **Exhibit 7B**.

**Implementation Actions.** This policy can be established by the City of Georgetown by amending their General Plan.

**Costs and Funding.** Adoption of this measure would involve administrative expenses for the City. These expenses would have to be paid out of the City's operating budget.

**Timing.** Amendments to General Plans take time to prepare and process. The required amendments for this measure are projected for 2005.

### **2. Enact Project Review Guidelines for the Review of Development Projects within the AIA.**

**Description.** This policy is proposed to apply throughout the AIA as shown on **Exhibit 7B**. The adoption of special project review criteria, specifically addressing airport land use compatibility, would provide guidance to land use decision-makers as they review project proposals.

A simple checklist could be prepared listing the important factors to consider in reviewing development proposals within the selected contour. The following criteria are suggested.

- ▶ Determine the sensitivity of the subject land use to aircraft noise levels. The F.A.R. Part 150 land use compatibility table can be used for this purpose. **Exhibit 7C** depicts the F.A.R. Part 150 land use compatibility guidelines.
- ▶ Advise the airport management of development proposals involving noise-sensitive land uses within the Airport Influence Area.
- ▶ Locate noise-sensitive public facilities outside the 65 DNL contour.
- ▶ Discourage the approval of rezonings, exceptions, variances,

and conditional uses which introduce noise-sensitive development into areas exposed to noise exceeding 65 DNL.

**Implementation Actions.** The City of Georgetown would adopt these project review criteria either through an amendment to the general plan or as administrative guidelines.

**Costs and Funding.** Adoption of this measure would involve administrative expenses for the City. These expenses would have to be paid out of the City's operating budget.

**Timing.** Amendments to general plans take time to prepare and process. The required amendments for this measure are projected for 2005.

**3. Change the Zoning Classification of Airport Property from R-P, Residential Planned, to a More Suitable Zoning Classification.**

**Description.** Airport property is zoned R-P, Residential Planned. This zoning designation allows for residential development as well as other noise-sensitive development. This zoning designation could pose problems in the future should portions of the property ever be sold or leased.

Consideration should be given to changing the zoning classification of airport property to a more suitable zone or a new airport zoning classification could be adopted.

**Implementation Actions.** This measure requires a change of zone by the City of Georgetown. The Georgetown City Council would likely have to approve the zoning change.

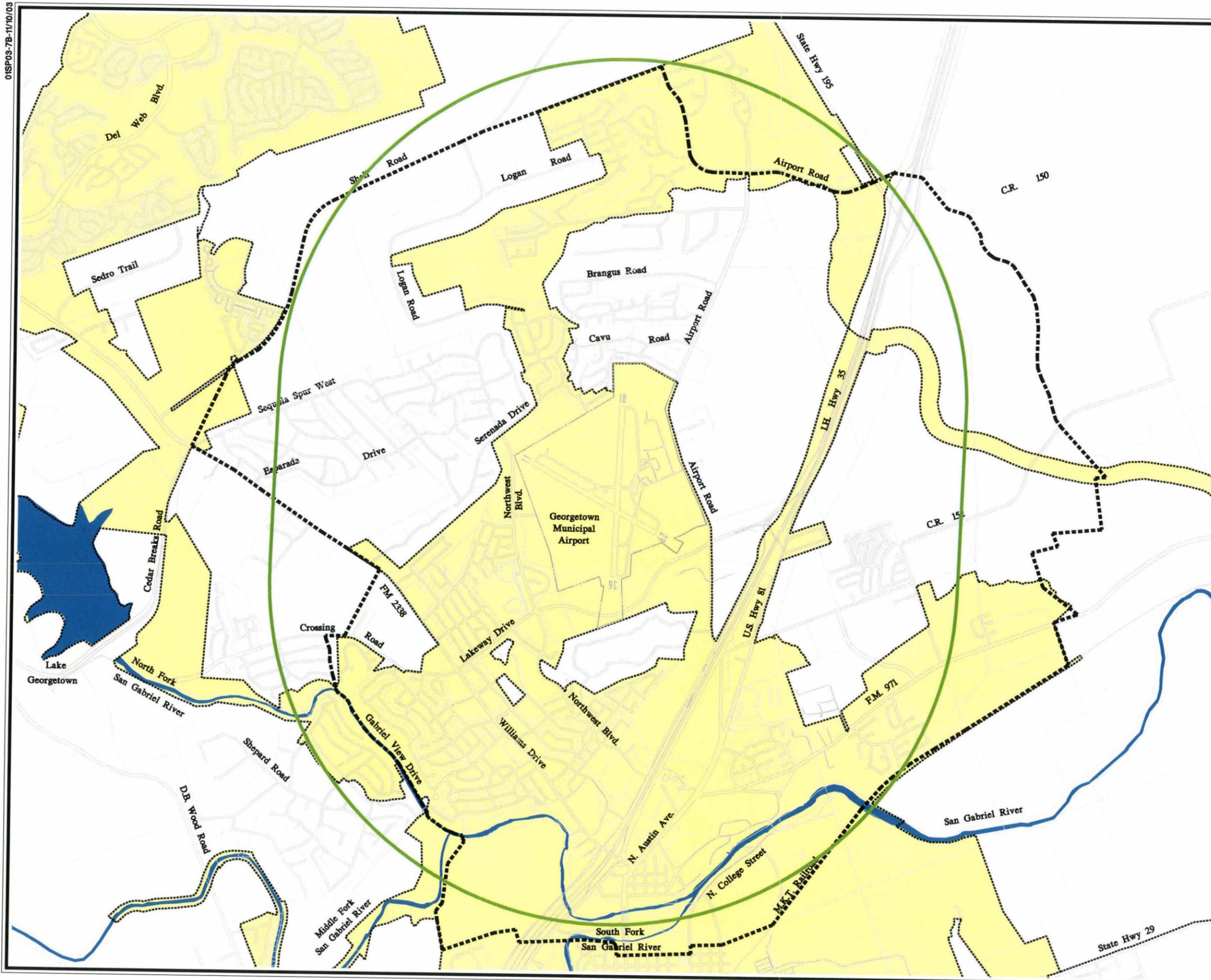
**Costs and Funding.** Adoption of this measure would involve administrative expenses for the City. These expenses would have to be paid out of the City's operating budget.

**Timing.** Amendments to zoning ordinances take time to prepare and process. The required amendments for this measure are projected for 2005.

**4. Amend the Avigation Easement Contained Within the City of Georgetown's Subdivision Regulations to Take the Form of a Noise and Avigation Easement.**

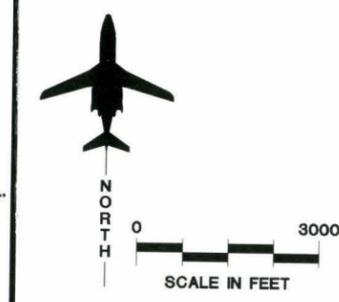
**Description.** The subdivision regulations adopted by the City are applicable within the entire AIA due to the presence of the City's Extra-territorial Jurisdiction (ETJ). Currently, the regulations contain a provision which requires that an avigation easement be placed on all final plats within two miles of Georgetown Municipal Airport. The purpose of this easement is to place height restrictions on development to ensure the safety of both pilots flying into the airport and residents living in proximity of the airport.

For the purpose of making future residents of the Airport Influence Area



- LEGEND**
- Detailed Land Use Study Area
  - ..... Municipal Boundary
  - - - - Airport Property
  - Airport Influence Area Boundary
  - Unincorporated Williamson County
  - Georgetown Jurisdictional Boundary

Source: City of Georgetown, Department of Geographic Information Systems.  
Coffman Associates Analysis



LAND USE	Yearly Day-Night Average Sound Level (DNL) in Decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
<b>RESIDENTIAL</b>						
Residential, other than mobile homes and transient lodgings	Y	N <sup>1</sup>	N <sup>1</sup>	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N
<b>PUBLIC USE</b>						
Schools	Y	N <sup>1</sup>	N <sup>1</sup>	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	Y <sup>4</sup>
Parking	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
<b>COMMERCIAL USE</b>						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail-building materials, hardware and farm equipment	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
Retail trade-general	Y	Y	25	30	N	N
Utilities	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
Communication	Y	Y	25	30	N	N
<b>MANUFACTURING AND PRODUCTION</b>						
Manufacturing, general	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y <sup>6</sup>	Y <sup>7</sup>	Y <sup>8</sup>	Y <sup>8</sup>	Y <sup>8</sup>
Livestock farming and breeding	Y	Y <sup>6</sup>	Y <sup>7</sup>	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
<b>RECREATIONAL</b>						
Outdoor sports arenas and spectator sports	Y	Y <sup>5</sup>	Y <sup>5</sup>	N	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.

See other side for notes and key to table.



## KEY

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

## NOTES

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- 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 5, 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.
- 7 Residential buildings require a NLR of 30.
- 8 Residential buildings not permitted.

Source: **F.A.R. Part 150**, Appendix A, Table 1.

aware of the noise produced by the airport, it would be appropriate for the City to amend its subdivision regulations to enhance the already required aviation easement by changing it to include a provision for noise. This would make future residents aware of not only the height restrictions imposed by the presence of the airport, but also the noise produced by the airport. A sample noise and aviation easement is contained in **Appendix E**.

**Implementation Actions.** This measure requires an amendment to the City's subdivision regulations. This amendment would most likely have to be approved by the Georgetown City Council.

**Costs and Funding.** Adoption of this measure would involve administrative expenses for the City. These expenses would have to be paid out of the City's operating budget.

**Timing.** Amendments to subdivision regulations take time to prepare and process. The required amendments for this measure are projected for 2005.

## **PROGRAM MANAGEMENT ELEMENT**

The success of the Noise Compatibility Program requires a continuing effort to monitor compliance and identify new or unanticipated problems and changing conditions. Three program management measures are recommended at Georgetown Municipal Airport. The City of Georgetown is

responsible for implementing these measures. They are discussed below and summarized in **Table 7C**.

### **1. Develop a Public Outreach and Noise Abatement Education Program.**

**Description.** The City of Georgetown should continue its public outreach program which is designed to educate, update, and solicit feedback concerning issues relating to aircraft noise. Potential methods of public outreach include meetings with citizen group representatives, realtors, public forums during Airport Advisory Board meetings, and the inclusion of various noise-related projects on the City's web site. The outreach program could also be used as a venue for the dissemination of information and descriptive brochures promoting the use of noise abatement flying techniques. An example is the preferential runway use and noise abatement departure turns outlined in Noise Abatement Recommendations Six and Seven.

**Implementation Actions.** Develop brochures and publish noise abatement/mitigation efforts on City's web page.

**Costs and Funding.** Outreach informational materials and web page revisions will cost approximately \$1,000 annually. This would be covered through the Airport's operating budget.

**Timing.** The outreach program can begin immediately after City Council approval of the Noise Compatibility Program.

## **2. Monitor Implementation of the F.A.R. Part 150 Noise Compatibility Program.**

**Description.** The airport management must monitor compliance with the Noise Abatement Element. This will involve checking periodically with airport users regarding compliance with the "Fly Friendly" procedures. Additionally, the run-up policy and noise complaint information should be reviewed periodically to evaluate the success of the program. It may be necessary from time to time to arrange for noise monitoring, noise modeling, or flight track analysis to study issues that may arise in the future.

The Airport Authority should also maintain communications with the City and County Planning Departments to follow progress in implementing the relevant measures of the Land Use Management Element.

**Implementation Actions.** The administrative actions discussed above in the "Description" will be necessary.

**Costs and Funding.** This measure will require airport administrative time and staff support. Expenditures for special noise monitoring, modeling studies, or consultant service could be necessary from time to time. For budgeting purposes, this cost is estimated at \$5,000. This would be covered through the Airport's operating budget.

**Timing.** This is an ongoing activity that should begin as soon as the Noise Compatibility Program is approved.

## **3. Publish a pilot guide.**

**Description.** A pilot guide describing airport noise abatement information should be prepared for pilots using Georgetown Municipal Airport. The guide should include an aerial photo showing the airport and the surrounding area, pointing out noise-sensitive land uses and preferred noise abatement procedures. It could also include other information about the airport that pilots would find useful. The guide should be suitable for insertion into a Jeppesen manual so that pilots will be able to conveniently use it.

Airport management should distribute copies to all owners of aircraft based at the airport and to the fixed base operators so they can offer them to transient pilots.

**Implementation Actions.** The airport is responsible for arranging for publication of a pilot guide.

**Costs and Funding.** The cost of a pilot guide is estimated at \$5,000.

**Timing.** Publication of a pilot guide is planned for 2005.

## **4. Update Noise Exposure Maps and Noise Compatibility Program.**

**Description.** The City of Georgetown should review the Noise Compatibility Program and consider revisions and refinements as necessary. A complete plan update will be needed periodically to respond to changing conditions in the local area and in the aviation industry.

This can be anticipated every five to 10 years.

An update may be needed sooner if major changes occur. However, an update may not be needed until later if conditions at the airport and in the surrounding area remain stable.

Proposed changes to the NCP should be reviewed by the FAA and all affected aircraft operators and local agencies. Proposed changes should be submitted to the FAA for approval after local consultation and a public hearing to comply with F.A.R. Part 150.

Even if the NCP does not need to be updated, it may become necessary to update the Noise Exposure Maps (NEMs). F.A.R. Part 150 requires the NEMs to be updated if any change in the operation of the airport would create a substantial, new, non-compatible use. The FAA interprets this to mean an increase in noise levels of 1.5 DNL or more above 65 DNL, over non-compatible areas that had formerly been compatible.

**Implementation Actions.** No specific implementation actions, other than those discussed above, are required.

**Costs and Funding.** Costs of a complete update of the Noise Compatibility Program are estimated at \$250,000. This would be eligible for up to 95 percent funding from the FAA. The City of Georgetown would be responsible for the remaining 5 percent. This would come from the Airport's operating budget.

**Timing.** This should be done as necessary. Updates are typically needed every five to 10 years, depending on how much change occurs at the airport and in the local area. For planning purposes, one update can be expected over the next 10 years.

## **RESIDUAL NOISE IMPACTS**

The recommended noise abatement and land use management programs will reduce the cumulative aircraft noise exposure impact now and in the future. A review of the residual impacts from the *Noise Compatibility Plan* is presented below.

The recommended noise abatement measures do not involve any changes that would alter the 2003 baseline noise exposure contours, shown in **Exhibit 7D**. Noise contours projected for the year 2008, however, would change with implementation of the proposed new noise abatement measures. The updated future noise contours are shown in **Exhibit 7E**. For the most part, the noise contours would be smaller to the north and south, and bow out slightly more to the southeast than projected in the 2008 baseline noise analysis presented in Chapters Three and Four of the *Noise Exposure Maps* document. (See Exhibit 4C after page 4-10 in Chapter Four.)

**Table 7A** shows the number of dwelling units exposed to noise for baseline conditions and after implementation of

the *Noise Compatibility Program*. With the implementation of the program, two existing dwellings are removed from the 65 DNL contour. Without proper land use planning, an additional nine dwelling units could be built within the 65 DNL noise exposure contours. Implementation of the recommendations within the Land Use Management Element would prevent these additional nine units.

**Table 7B** contains the population exposed to noise with implementation of the *Noise Compatibility Program* in comparison with baseline conditions. With the implementation of the program, six current residents would be removed from the 65 DNL noise contour. As discussed above, without proper land use planning, an additional 26 residents could reside within the 65 DNL noise contour in 2008.

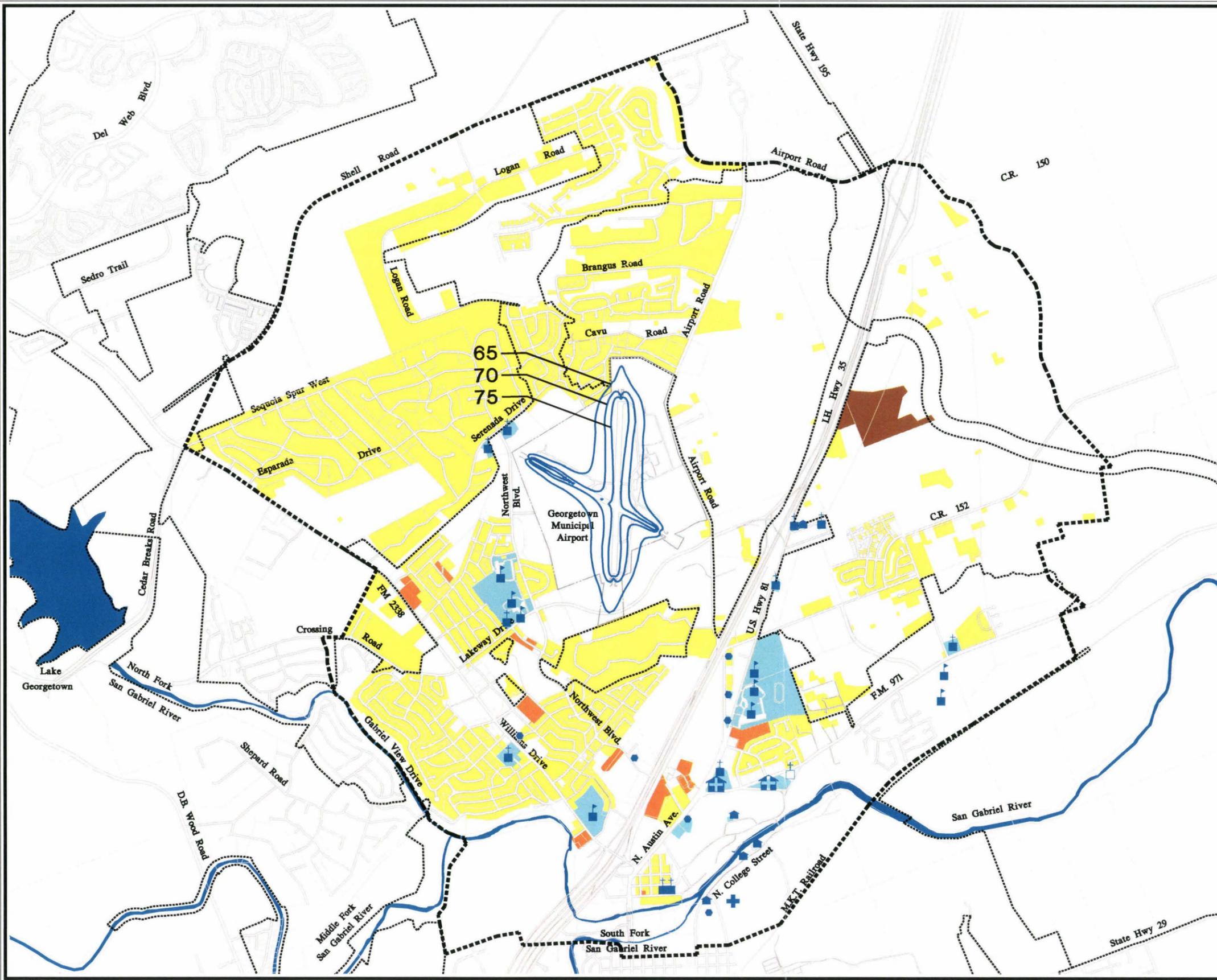
## **SUMMARY**

The *Noise Compatibility Program* for Georgetown Municipal Airport is summarized in **Table 7C** on the next page. The total cost of the program is estimated at **\$1,060,000**. Significant

costs are related to acoustically treating dwellings within the 65 DNL noise contour (\$540,000). Other significant costs include the construction of a run-up enclosure (\$250,000).

Approximately 93 percent of the cost (\$988,000) would be eligible for FAA funding through the noise set-aside of the Federal Airport Improvement Program. Less than two percent (\$20,000) of the cost would be paid through the Airport's operating budget. The remaining five percent (\$52,000) would be covered through the Airport's capital budget.

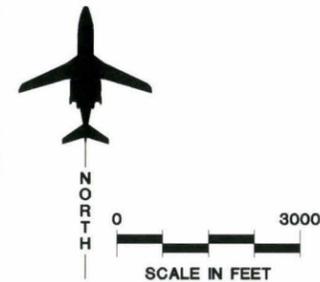
The recommended noise abatement measures can reduce disturbing aircraft noise in the area. The land use planning measures can also help to limit the potential for future noise-sensitive development in the airport area. Continuing program management will provide for a timely response to conditions that may change over time and require a re-evaluation of future noise conditions. While the City of Georgetown must provide leadership and coordination of the entire program, success hinges on the cooperation of all involved parties.

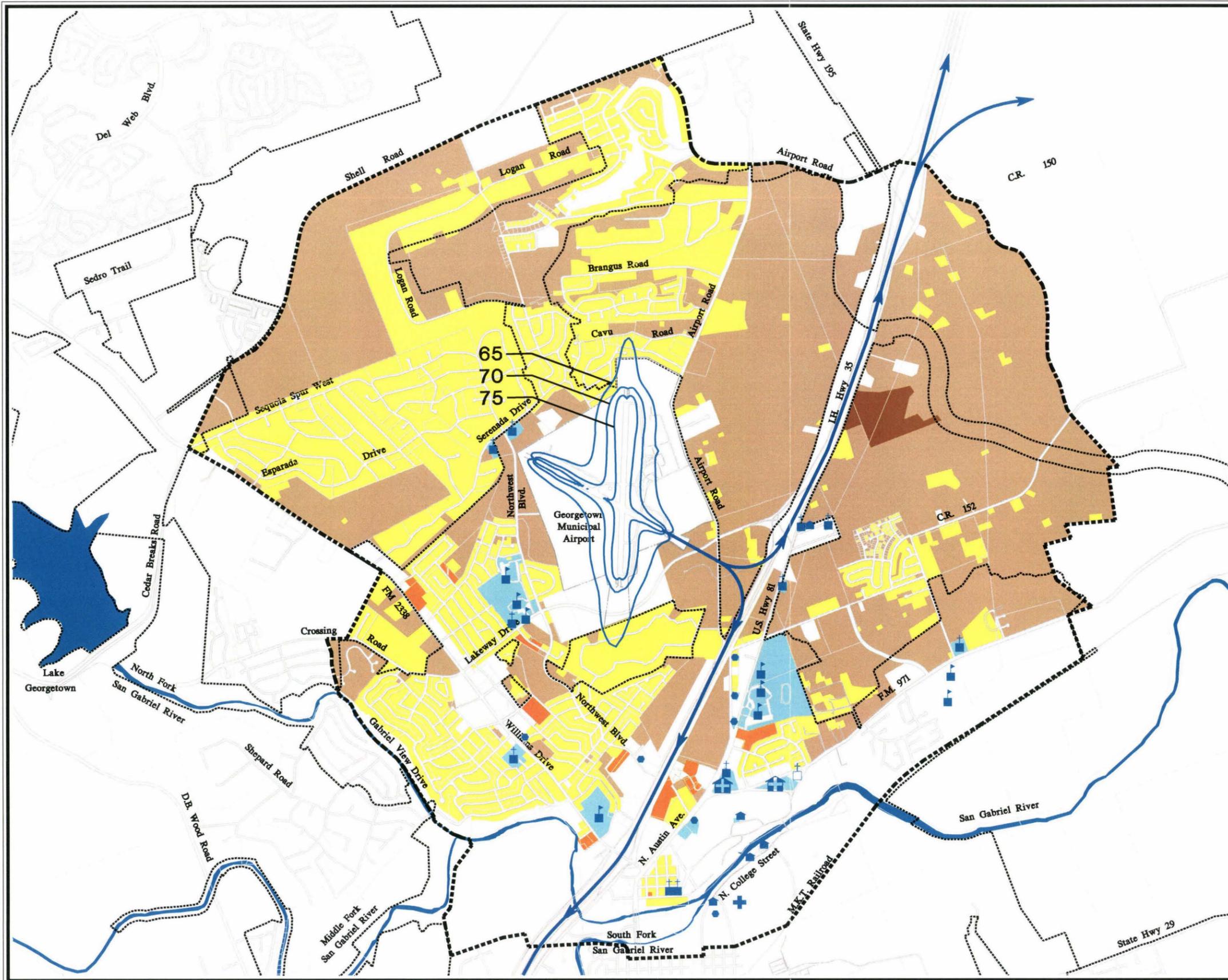


**LEGEND**

- Detailed Land Use Study Area
- Municipal Boundary
- Airport Property
- 2003 DNL Noise Exposure Contour, Significant Effect
- Residential Low Density
- Residential Medium Density
- Recreational Vehicle Park
- Noise Sensitive Institutions
- School
- Day Care Facility
- Community Center
- Residential Care Facility
- Place of Worship
- Cemetery

Source: Aerial Photography, dated April 4, 2001  
 Corrigan Consulting, Inc.  
 Coffman Associates Analysis.

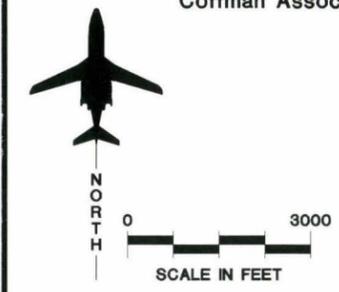




**LEGEND**

- Detailed Land Use Study Area
- Municipal Boundary
- Airport Property
- Noise Abatement Departure for Rwy 11
- 2008 DNL Noise Exposure Contour, Significant Effect
- Residential Low Density
- Residential Medium Density
- Recreational Vehicle Park
- Noise Sensitive Institutions
- Proposed Development Areas
- School
- Day Care Facility
- Community Center
- Residential Care Facility
- Place of Worship
- Cemetery

Source: Aerial Photography, dated April 4, 2001  
 Corrigan Consulting, Inc.  
 City of Georgetown Zoning Ordinance,  
 April 26, 2000.  
 Coffman Associates Analysis.



**Exhibit 7E**  
 2008 NOISE EXPOSURE CONTOURS WITH  
 NOISE COMPATIBILITY PLAN

**TABLE 7A**  
**Noise-Sensitive Land Uses Exposed to Noise**  
**With Noise Compatibility Program Versus Baseline Conditions**

	Baseline Noise (Without Program)		With Noise Compatibility Program
	2003	2008 <sup>1</sup>	2008 <sup>2,3</sup>
<b>Existing Noise-Sensitive Institutions</b>			
65+ DNL	0	0	0
<b>Potential Future Noise-Sensitive Institutions</b>			
65+ DNL	NA	0	0
<b>Existing Dwellings<sup>2</sup></b>			
65+ DNL	6	27	25
<b>Additional Potential Dwellings<sup>3</sup></b>			
65-70 DNL	NA	5	9
70-75 DNL	NA	0	0
75+ DNL	NA	0	0
<b>Total Future Dwellings</b>			
Total above 65 DNL	NA	32	34

Source: Coffman Associates analysis.

<sup>1</sup> Represents 2008 *Noise Exposure Map* impacts without *Noise Compatibility Program*.

<sup>2</sup> The impact of the occupants within existing dwelling units inside the 65+ DNL contour will be reduced with implementation of the sound insulation program.

<sup>3</sup> Implementation of the land use management measures would reduce or eliminate nine potential residents by 2008.

**TABLE 7B**  
**Population Exposed to Noise**  
**With Noise Compatibility Program Versus Baseline Condition**

	Baseline Noise (Without Program)		Baseline Noise (With Program)
	2003	2008 <sup>1</sup>	2008 <sup>3,4</sup>
<b>Existing Population</b>			
65-70 DNL	18	73	70
70-75 DNL	0	6	3
75+DNL	0	0	0
Subtotal above 65 DNL	18	79	73
<b>Future Potential Population</b>			
65-70 DNL	NA	14	26
70-75 DNL	NA	0	0
75+DNL	NA	0	0
Subtotal above 65 DNL	NA	14	26
Total Population	18	93	99
LWP <sup>2</sup> above 65 DNL	7	37	38

- <sup>1</sup> Includes existing and potential future residents of additional housing that may be developed inside noise contours.
- <sup>2</sup> LWP - level-weighted population is an estimation of the number of people actually annoyed by noise. The actual population within each 5 DNL range is multiplied by the appropriate response factor to compute LWP. The factors are: 65-70 DNL - .376; 70 to 75 DNL - .644; 75+ DNL - 1.00. See the *Technical Information Paper*, "Measuring the Impact of Noise on People."
- <sup>3</sup> The impact on the occupants within existing dwelling units inside the 65+ DNL contour will be reduced with implementation of the sound insulation program.
- <sup>4</sup> Implementation of the land use management measures would reduce or eliminate 26 potential residents by 2008.

Source: Coffman Associates analysis.

**TABLE 7C**  
**Summary of Noise Compatibility Program, 2003-2008**  
**Georgetown Municipal Airport**

Measure	Cost to Airport or Government	Direct Cost to Users <sup>1</sup>	Timing	Lead Responsible Agency <sup>2</sup>	Potential Funding Sources
<b>NOISE ABATEMENT ELEMENT</b>					
1. Encourage Departing Aircraft To Use Best Rate Of Climb (Vy).	Administrative	None	Ongoing	City of Georgetown	Airport Operating Budget
2. Encourage Aircraft to Begin Departure from the End of the Runway.	Administrative	None	Ongoing	City of Georgetown	Airport Operating Budget
3. Avoid Prolonged Run-Ups and Perform them as Near the Center of the Airport as Possible.	Administrative	None	Ongoing	City of Georgetown	Airport Operating Budget
4. Continue Use of NBAA Standard Noise Abatement Departure Procedures.	Administrative	None	Ongoing	City of Georgetown	Airport Operating Budget
5. Maintain Right-hand Traffic Pattern on Runway 36.	Administrative	None	Ongoing	City of Georgetown	Airport Operating Budget
6. Designate Runway 11 as the Preferential Nighttime Runway.	Administrative	Slight increase in operational expenses due to increased taxi times	2005	City of Georgetown	City of Georgetown and FAA
7. Runway 11 Noise Abatement Departure Turn.	Administrative	Slight increase in operational expenses due to increased taxi times	2005	City of Georgetown	City of Georgetown and FAA

**TABLE 7C (Continued)**  
**Summary of Noise Compatibility Program, 2003-2008**  
**Georgetown Municipal Airport**

Measure	Cost to Airport or Government	Direct Cost to Users <sup>1</sup>	Timing	Lead Responsible Agency <sup>2</sup>	Potential Funding Sources
<b><i>NOISE ABATEMENT ELEMENT (Continued)</i></b>					
8. Promote Use Of AOPA Noise Awareness Steps by Light Single and Twin-Engine Aircraft.	Administrative	None	Ongoing	City of Georgetown	Airport Operating Budget
9. Continue to Coordinate With Military Units on Helicopter Training Issues.	Administrative	None	2005	City of Georgetown	Airport Operating Budget
10. Orient New Buildings at the Airport to Shield Nearby Neighborhood from Noise on the Ramp and Runways.	Administrative	None	2005	City of Georgetown	Airport Operating Budget
11. Build Engine Maintenance Run-up Enclosure.	\$250,000	None	2005	City of Georgetown	Airport Capital Budget (5%) FAA (95%)
<b><i>NOISE MITIGATION ELEMENT</i></b>					
1. Acoustically Treat 27 Homes Within the 2008 65 DNL Noise Contour.	\$540,000 plus administrative expenses	None	2005	City of Georgetown	Airport Capital Budget (5%) FAA (95%)

**TABLE 7C (Continued)**  
**Summary of Noise Compatibility Program, 2003-2008**  
**Georgetown Municipal Airport**

Measure	Cost to Airport or Government	Direct Cost to Users <sup>1</sup>	Timing	Lead Responsible Agency <sup>2</sup>	Potential Funding Sources
<b>LAND USE PLANNING ELEMENT</b>					
1. Establish an Airport Influence Area (AIA) and Adopt the 2008 Noise Contours as a Basis for Noise Compatibility Planning.	Administrative	None	2005	City of Georgetown	City Operating Budget
2. Enact Project Review Guidelines for the Review of Development Projects within the AIA.	Administrative	None	2005	City of Georgetown	City Operating Budget
3. Change the Zoning Classification of Airport Property from R-P, Residential Planned, to a More Suitable Zoning Classification.	Administrative	None	2005	City of Georgetown	City Operating Budget
4. Amend the Avigation Easement Contained Within the City of Georgetown's Subdivision Regulations to Take the Form of a Noise and Avigation Easement.	Administrative	None	2005	City of Georgetown	City Operating Budget

**TABLE 7C (Continued)**  
**Summary of Noise Compatibility Program, 2003-2008**  
**Georgetown Municipal Airport**

Measure	Cost to Airport or Government	Direct Cost to Users <sup>1</sup>	Timing	Lead Responsible Agency <sup>2</sup>	Potential Funding Sources
<b>PROGRAM MANAGEMENT ELEMENT</b>					
1. Develop a Public Outreach and Noise Abatement Education Program.	\$1,000 annually	None	2005	City of Georgetown	Airport Operating Budget
2. Monitor Implementation of the Updated F.A.R. Part 150 Noise Compatibility Program.	\$5,000	None	Ongoing	City of Georgetown	Airport Operating Budget
3. Publish a pilot guide.	\$5,000	None	2005	City of Georgetown	Airport Operating Budget
4. Update <i>Noise Exposure Maps</i> and <i>Noise Compatibility Program</i> .	\$250,000	None	2013	City of Georgetown	Airport Capital Budget (5%) FAA (95%)
		<b>Funding Source</b>		<b>Amount</b>	<b>Percent</b>
<b>Total Costs and Funding</b>		City Capital Budget		\$52,000	4.9%
		City Operating Budget		\$20,000	1.9%
		FAA		\$988,000	93.2%
		Total		\$1,060,000	