

PHOENIX'S NOISE LAND RISES

A community works together to re-purpose noise land parcels

by Michael Hotaling

Airports and the FAA have invested billions of dollars over the last few decades to mitigate the impacts of aircraft-generated noise on people living around airports.

One of the most effective methods is acquiring residential structures and relocating occupants outside of the noise-impact area. This approach is a win-win scenario for the homeowner and the airport—providing new opportunity for residents and creating a buffer of compatible land adjacent to the airport. The City of Phoenix and Phoenix Sky Harbor International Airport recently completed the PHX Land Reuse Strategy study, which developed frameworks to revitalize and reinvent a neighborhood that had relocated a significant number of residents, leaving a patchwork of remaining residential, commercial, and industrial properties.

FAA Airport Improvement Program grants for land acquisition to mitigate noise impacts require the land to be converted to a compatible use and disposed of

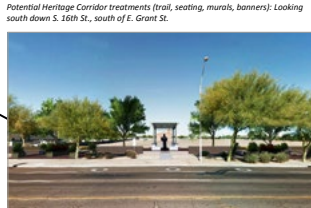
as soon as practical. After an audit showed that all 109 airports with these grants were retaining land that wasn't needed, the FAA required every airport to prepare a comprehensive noise land inventory and reuse report. The City of Phoenix completed their first report in 2008 for land acquired early in the City's Community Noise Reduction Program (CNRP). Shortly after the City submitted their first report, the Voluntary Acquisition and Relocation Services (VARS) element of the CNRP hit full stride, offering 1,200 residential property owners full market value for their home along with financial and other relocation assistance. More than 800 homeowners elected to participate, significantly reducing the number of people exposed to high levels of noise.

While the VARS program was a success, making productive use of the remaining properties was daunting. Fortunately, the City took advantage of a new FAA pilot land redevelopment program to initiate a renewal of the area. Prior to the pilot program, the City's noise land inventory and reuse plan was updated—branded as the PHX Land Reuse Strategy. C&S led the consultant team, and took a much more robust approach than the prior plan.

An analysis of the 743 parcels explored issues far beyond number, location, and attributes. The goal was to identify strategies complementing significant efforts already completed, including transit-oriented development, cultural and historic resources, and planned infrastructure. A market analysis determined that this transitional area between the downtown core and the airport is best suited for industrial and mixed use developments in the near- to mid-term.

Significant stakeholder engagement included a program management committee with representatives of City departments, and an advisory committee of





Potential gateway treatments (intersection paving materials, crosswalks): Intersection of E. Buckeye Rd. and S. 7th St., looking east.



Potential gateway treatments (murals): S. 16th St., at the I-17 overpass, looking south.

radically altered by the mitigation program. FAA has generally interpreted that the grant assurances prohibit future residential uses. However, the situation is complicated because shifting noise contours—resulting from a transition to Stage 3 aircraft and fewer operations—have left some acquired parcels outside of the 2025 day-night average noise level (DNL) 65 decibel (dB) contour.

The community-preferred Land Reuse Framework that informs the next phase of this process—the land redevelopment program—seeks to accommodate the desires of the community and incorporate future residential uses in areas of compatibility. This framework emphasizes several key strategies:

Core village	Consolidate traditional low-scale residential density in the central planning area to restore neighborhoods in areas outside of the future DNL 65 dB contour.
Mixed-use development	Co-locate residential and non-residential uses in multi-level structures to complement a transit-oriented development corridor.
Two catalytic sites	Focused assembly of parcels for business parks to stimulate investment in the surrounding area and create momentum of economic development.
Culture corridor	A heritage pathway linking important historic resources throughout the neighborhoods.
Historic district	The community expressed a desire to form a historic district to honor an individual who made contributions to the area.

senior civic and business leaders. Three distinct areas—North, Central, and South—compose the VARS area, so roundtable groups were formed for each area. Community meetings gathered meaningful input from interested individuals, organizations, and groups. To form the long-term strategy, a World Café model was used to effectively seek input and dialogue from large groups. Over several hours, participants generated concepts, ideas, and strategies at collaborative work stations hosted by members of the study team. Three key goals emerged, becoming foundations for establishing frameworks for comparison to determine the highest and best use of the acquired parcels. These goals are:

Stabilize and strengthen neighborhoods	Create a sense of identity and change perceptions	Expand economic opportunity
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Each of these goals are aligned with policies and specific strategies to enable actions in support of the goals.

Frameworks developed from this effort evolved into distinct alternatives that were evaluated using a diverse matrix rooted in the EONS (*Economic, Operational efficiency, Natural environment, Social responsibility*) principles of sustainability. A final round of engagement sessions sought community feedback on the frameworks for fine tuning.

Residents who elected to remain in their homes advocated for an option with residential uses, hoping to recreate neighborhoods

While aircraft noise remains one of the most significant environmental issues for airports, the City of Phoenix took a proactive approach in preparing a community-intensive and analytic-based assessment of the highest and best use of their noise land. The PHX Land Reuse Strategy is now the initial guidance to the team implementing the land redevelopment program. Many lessons can be learned, including carefully considering the potential outcome scenarios of mitigation programs prior to implementation; fostering community collaboration, even when conversations may be uncomfortable; and acting as the community's advocate when working with regulatory agencies.



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Michael is C&S's senior vice president and aviation practice leader, and managed the PHX Land Reuse Strategy. He collaborates with a team of nearly 100 professionals dedicated to providing aviation planning, environmental and sustainability, engineering, and construction phase services from offices nationwide.

INVESTED IN PHL'S FUTURE

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>>> How did you get involved in the aviation industry? When I was a kid, I wanted to become either an architect or a pilot. I accomplished one goal when I graduated from architecture school, and later I worked for a firm that specialized in airport planning and design, accomplishing my second goal. This experience connected me to the aviation industry, creating that combination that I always wanted.

>>> How have you seen the industry change? In the last ten years, consolidation has been the main change—domestic airlines are merging, seeking strong market competition. One major change in operations was the decision to drop flight frequency and direct service flights to non-hub destinations; the second was introducing larger-seat-capacity aircraft between airport hubs; and the third is use of commuter planes to mid-size and small airports to feed their hubs. These significantly reduced aircraft operations, generating more airfield capacity. We've also seen the growth of low-cost carriers competing with legacy airlines, and how the legacy carriers launched a "service menu" to most passengers, including additional charges for check-in baggage and seating preference.

>>> As an embedded extension of staff at Philadelphia International, what is your role in serving the airport?

As part of the capital development program at PHL, I am design manager for projects managed by the City of Philadelphia Department of Aviation. Working with project managers, we take landside and airside tasks coming from planning into design and manage them throughout the design process until construction documents are complete and construction procurement initiated. Our team is responsible for maintaining schedule and budget, ensuring that all elements of design are developed and all requirements are met while providing design innovation and optimization, and improving sustainability.

>>> What are your current projects and initiatives?

I am a part of the Peer Review Team for the \$2 billion Terminal Modernization Program, where I am working with the design team to expand the outbound and inbound baggage systems for American Airlines, and passenger processing improvements for the consolidation of the airline facilities. As a design manager, I am involved in projects that range from the reconstruction of Runway 6/24 at Philadelphia Northeast Airport to restrooms renovations at PHL.

>>> What innovations do you see affecting travel at PHL and other airports?

Technology that expedites passenger and baggage processes is substantially affecting airport terminal facilities planning and design. Working directly with an airline agent is less necessary now, so ticketing lobbies are reconfigured to include ticketing kiosks with self-baggage tag capabilities. Baggage systems now feature high-speed conveyors, and high baggage screening machines and long bag travel distances at hub terminals require different needs and solutions. International arriving processing facilities are changing as well, with the introduction of Customs and Border Patrol's "Bag First" protocol. The implementation of U.S. pre-clear facilities necessitates customized solutions at international terminal layouts.

>>> What is your dream vacation destination and activity?

Beach destinations are always on top of the list for me. I love to be able to relax at the beach while reading a book or enjoying a drink. I love to explore new places, and enjoy visiting different countries, trying different cultures, food, etc.

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C&S is proud to announce that two of our young aviation leaders were selected for *Aviation Business's* 40 under 40 list (read the full issue online at aviationpros.com). The *Airport Business* Top 40 Under 40 showcases top talent and leading thinkers in the aviation industry who are building success today and innovations for the future. Candidates were vetted on innovation, outstanding attributes, and commitment and involvement in the industry.

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