N 1st St.
NW 12th St.
W. McKelvie Rd.
NW 27th St.
NW 40th St.
NW 56th St.
NW 12th St.
W. Cornhusker Hwy
S. Folsom St.
S. Coddington Ave.
W. A St.
SW 40th St.
SW 56th St.
W. O St.
W. Vine St.
W. Holdrege St.
NW 48th St.
W. Adams Rd.
W. Fletcher Ave.
W. VanDorn St.
70
66
60
34
2

LEGEND

- Airport Property
- Municipal Boundaries
- Extra-territorial Jurisdiction
- Railroad Tracks
- Study Area
- 2002 Noise Exposure Contour, Marginal Effect
- 2002 Noise Exposure Contour, Significant effect
- Floodplains
- Park & Openspace
- Public
- Commercial
- Industrial
- Undeveloped Areas That Are Compatibly Zoned

Source: Base Information and Map: City of Lincoln Geographic Information System, May 2002. Coffman Associates Analysis.

NORTH

0 4000
SCALE IN FEET

Lincoln Airport

Exhibit 5D
COMPATIBLE LAND USE AND COMPATIBLE ZONING

- EVALUATION

The undeveloped areas within the airport environs are primarily zoned for low density residential or agriculture. Both of these zoning classifications are designed to allow lower density developments; therefore, reducing residential zoning density for undeveloped land is not applicable.

- CONCLUSION

This alternative need not be considered further.

**Airport Compatibility Overlay Zoning**

Airport compatibility overlay zoning (sometimes called "combining zoning") is intended to provide a layer of special purpose regulations to address special environmental constraints, or problems, by setting performance standards to protect the public. Overlay zoning involves the creation of one or more special zoning districts that supplement or combine with the regulations of the general purpose zoning districts. These controls are often used, for example, to regulate the height of structures within runway approach areas and in other areas near the airport, or to promote development which is compatible with aircraft noise levels. Airport compatibility overlay zoning is used around many airports in the country to establish special land use controls whose purpose is to protect the public's health, safety, and welfare from conflicts that may arise between aviation and urban development.

Airport compatibility overlay zoning regulations are usually established as "combining" regulations in that the underlying zoning (i.e., residential, commercial, industrial, etc.) remains in place and is supplemented by the overlay zone. The land within the overlay zone is subject to the requirements of two zoning districts – the underlying zone and the overlay zone. The strictest requirements of both zones apply to the affected property.

The intention of airport compatibility overlay zoning is to avoid the problems associated with incompatible development in high noise areas. Regulations in airport compatibility overlay zones can prohibit noise-sensitive uses, as long as the underlying zone permits enough other land uses to provide an opportunity for the economically viable use of the land. The regulations can also require sound insulation in the construction of noise-sensitive uses.

Airport compatibility overlay zoning is administered by the local land use regulatory agency. In areas where noise crosses jurisdictional boundary lines, it is helpful to local developers if the jurisdictions cooperate with a unified approach to overlay zoning. The boundary may follow the actual contours, or, for the sake of simplified administration, nearby streets, property lines, or natural features.

Among the advantages of airport compatibility overlay zoning are the simplicity of the required amendments, the simplicity of administration, the clear relationship of the regulations to their purpose, and the minimal impact of the regulations on the application of the zoning ordinance in other parts of the community.

Boundaries of airport compatibility overlay zones are usually determined by the critical noise contours based on local perceptions – often the 55, 60, 65, 70, and 75 DNL contours, but with increasing emphasis on the airport influence area.

- EVALUATION

The City of Lincoln has adopted a form of airport overlay zoning which is referred to as the Airport Noise Environs District. This district consists of four levels of regulation which are described in detail and summarized as follows.

**Airport Noise Environs District Boundary**. Within the boundaries of the district, avigation easements are required as a condition of development approval. As discussed previously in this chapter, consideration could be given to expanding the boundary of the noise district to the west as depicted on **Exhibit 5B**. This area is planned for residential land uses within the comprehensive plan. Should the boundary be extended, avigation easements would be required prior to the development of this area which would help ensure that future property owners are aware of the impact of the airport.

**65 to 70 DNL Noise Contour**. No types of development are prohibited within this noise contour; however, the development of residential land uses requires the approval of the Lincoln-Lancaster County Planning Department as well as the incorporation of sound attenuation into structure design and construction.

**70 to 75 DNL Noise Contour.** A number of noise-sensitive land uses are prohibited within this noise contour including residential uses, schools, churches, and libraries.

**75+ DNL Noise Contour.** No noise-sensitive land uses are permitted within this noise contour.

Based upon the previous discussion within the land use compatibility boundary establishment portion of this chapter, consideration should be given to incorporating the 60 DNL noise contour into the Airport Environs Noise District. This would ensure that noise-sensitive dwellings are sound-insulated to minimize the impact of aircraft operations on residents. Development could be allowed to occur within this noise contour; however, a requirement for sound attenuation standards should be incorporated. Additionally, some form of fair disclosure could be required. The fair disclosure could take the form of a statement on the plat or maps illustrating the various boundaries of the Airport Environs Noise District within the sales office of the new subdivision.

Consideration could also be given to modifying the land uses allowed within the 2002 65 DNL noise contour. The FAA strongly discourages the construction of noise-sensitive developments within the 65 DNL noise contour. In fact, noise-sensitive developments constructed after October 1, 1998 are not always eligible for the expenditure mitigation measures described later in this chapter. Consideration could be given to not allowing the construction of residences, schools, churches, and libraries within the 65 DNL noise contour.

The current requirements of development within the 70 and 75 DNL noise contours could remain as currently stated within the Airport Environs Noise District.

**Exhibit 5E** depicts the proposed boundaries of the various zones and **Table 5A** outlines a potential noise compatibility overlay matrix which could be included within the modified Airport Environs Noise District.

- CONCLUSION

The City of Lincoln could consider modifying its existing Airport Environs Noise District regulations to reflect the change in the noise contours as well as incorporation of the 60 DNL noise contour. This would be consistent with the national trend of establishing the 60 DNL as a threshold of significance, be more in line with lower ambient noise levels present in the Lincoln Airport area, and help ensure future compatible development within the immediate airport environs.

**Subdivision Regulations**

Subdivision regulations control the platting of land by setting standards for site planning, lot layout, and the design of utilities and public improvements. They can encourage compatible development around an airport by requiring the consideration of aircraft noise during the plat review by public officials. This might take the form of requiring further noise attenuation features in the site plan or a decrease or shift in the density of portions of the development.

Subdivision regulations are not well-suited to addressing needs for noise attenuation, although they can be used to inform prospective future property owners of the risk of aircraft noise. In some communities, noise levels are shown on the final subdivision plats either by drawing the noise contours on the plats or by assigning noise levels to the lots. This makes the noise information a matter of public record. An important disadvantage is that, while the plat is recorded and on file forever, noise levels can change.

Another approach is to write a note on the plat, or record a covenant with the plat, stating that the property is subject to potentially disruptive aircraft noise and advising consultation with local planning officials and the airport proprietor to get current information about the noise situation. As a practical matter, however, buyers of property rarely look at the plats.

**TABLE 5A**
**Alternative Airport Environs Noise District Overlay Matrix**
**Lincoln Airport**

| | *Uses Allowed Within Each Zone* | | | |
|---|---|---|---|---|
| | ***Airport Environs Noise District*** | *60-65 DNL* | *65-70 DNL* | *70-75 DNL* |
| ***RESIDENTIAL*** | | | | |
| Single-family, duplex, multi-family, manufactured housing | Y[1,2] | Y[1,2,3,4] | N | N |
| Recreational vehicle parks | Y[1,2] | Y[1,2,3,4] | N | N |
| Other residential | Y[1,2] | Y[1,2,3,4] | N | N |
| ***PUBLIC FACILITIES*** | | | | |
| Education facilities | Y[1,2] | Y[1,2,3,4] | N | N |
| Religious facilities, libraries, museums, galleries, clubs and lodges | Y[1,2] | Y[1,2,3,4] | N | ***N*** |
| Outdoor sport events, entertainment and public assembly, except amphitheaters | Y[1,2] | N | N | N |
| Indoor recreation, amusements, athletic clubs, gyms and spectator events | Y[1,2] | Y[1,2,4] | Y[1,5] | N |
| Community and neighborhood parks | Y[1] | Y[1] | Y[1] | N |
| Extensive natural recreational areas | Y[1] | Y[1] | Y[1] | Y[1] |
| Outdoor recreation: tennis, golf courses, riding trails, etc. | Y[1,2] | Y[1] | Y[1] | Y[1] |
| Cemeteries | Y | Y | Y | N |
| ***COMMERCIAL*** | | | | |
| Hotels/motels | Y[1,2] | Y[1,2] | Y[1,2] | N |
| Hospitals and other health care services | Y[1,2] | Y[1,2,3,4] | N | N |
| Services: finance, real estate, insurance, professional and government offices | Y[1,2] | Y[1,2,4] | Y[1,2,4] | Y[1,2,4] |
| Retail sales: building materials, farm equipment, automotive, marine, mobile homes, recreational vehicles and accessories | Y[1,2] | Y[1,2,4] | Y[1,2,4] | Y[1,2,4] |
| Restaurants, eating and drinking establishments | Y[1,2] | Y[1,2,4] | Y[1,2,4] | Y[1,2,4] |
| Retail sales: general merchandise, food, drugs, apparel, etc. | Y[1,2] | Y[1,2,4] | Y[1,2,4] | Y[1,2,4] |
| Personal services: barber and beauty shops, laundry and dry cleaning, etc. | Y[1,2] | Y[1,2,4] | Y[1,2,4] | Y[1,2,4] |

**TABLE 5A (Continued)**
**Alternative Airport Environs Noise District Overlay Matrix**
**Lincoln Airport**

| | *Uses Allowed Within Each Zone* | | | |
|---|---|---|---|---|
| | ***Airport Environs Noise District*** | *60-65 DNL* | *65-70 DNL* | *70-75 DNL* |
| ***COMMERCIAL (Continued)*** | | | | |
| Automobile service stations | Y[1,2] | Y[1,2] | Y[1,2] | Y[1,2] |
| Repair services | Y[1,2] | Y[1,2] | Y[1,2] | Y[1,2] |
| ***INDUSTRIAL*** | | | | |
| Processing of food, wood and paper products; printing and publishing, warehouses, wholesale and storage activities | Y[1,2,5] | Y[1,2,5] | Y[1,2,5] | Y[1,2,5] |
| Refining, manufacturing and storage of chemicals, petroleum and related products, manufacturing and assembly of electronic components, etc. | Y[1,2,5] | Y[1,2,5] | Y[1,2,5] | Y[1,2,5] |
| Manufacturing of stone, clay, glass, leather, gravel and metal products; construction and salvage yards; natural resource extraction and processing, agricultural, mills and gins | Y[1,2,5] | Y[1,2,5] | Y[1,2,5] | Y[1,2,5] |
| ***AGRICULTURE*** | | | | |
| Animal husbandry; livestock farming, breeding and feeding; plant nurseries (excluding retail sales) | Y[1,2] | Y[1,2] | Y[1,2] | Y[1,2] |
| Farming (except livestock) | Y[1,2] | Y[1,2] | Y[1,2] | Y[1,2] |
| ***MISCELLANEOUS*** | | | | |
| Transportation terminals, utility and communication facilities | Y[1,2] | Y[1,2] | Y[1,2] | Y[1,2] |
| Vehicle parking | Y[1] | Y[1] | Y[1] | Y[1] |
| Signs | Y | Y | Y | Y |

**KEY TO TABLE 5A**

| | |
|---|---|
| Y | Land use is compatible and is permitted. |
| N | Land use is incompatible and is not permitted. |
| 1 | Development requires an avigation easement be issued as a condition of, and prior to, the authorization for development. |
| 2 | A fair disclosure agreement and covenant shall be recorded as a condition of development approval for all permitted uses in the Airport Environs Noise District. All new plats recorded shall be inscribed with the following: "*These properties, due to their proximity to Lincoln Airport, are likely to experience aircraft overflights, which could generate noise levels that may be of concern to some individuals.*" |
| 3 | Development must be approved as a conditional use by the Planning Director. |
| 4 | Development is required to incorporate acoustical features as a condition of building permit issuance. Acoustical features include a solid core or metal-clad door, equipped with a wood or metal storm door, storm or multiple-glazed windows, and mechanical ventilation to provide adequate environmental comfort with all windows and doors closed. Through-the-door mailboxes, skylights, or other direct openings to the outside are prohibited. |
| 5 | Uses which produce air pollutants that may obscure vision in any way, or which involve raw materials, products or by-products that pose a potential explosive hazard, are not permitted. |

Note: Where property is undeveloped, only such portion of it as is actually within the DNL lines shall be considered at or within that DNL line. However, at such time as said property shall be subdivided or platted, any platted build-able lots intersected by an DNL line shall be deemed to be wholly within the highest DNL line.

Subdivision regulations can help protect the airport from the risk of noise damage suits while providing for notice to potential buyers of property by requiring, as a condition of subdivision approval, the dedication of noise and avigation easements and non-suit covenants in high-noise areas. This is similar to requirements for the dedication of street right-of-way or utility easements usually found in subdivision regulations.

An easement is a limited right to use property owned by another. A noise and avigation easement gives the airport, as owner of the easement, the right to direct aircraft over the property and, thus, to make noise. These easements serve notice that the property is subject to aircraft noise which may, at times, infringe on a resident's enjoyment of property and may, depending on the degree of acoustical treatment of the dwelling and the individual's sensitivity to noise, affect his or her well-being. The easement should state clearly that noise levels might increase in the future and that flight patterns or operating times might change. A noise and avigation easement often includes a covenant waiving the property owner's right to sue the airport proprietor for disturbances caused by aircraft noise.