

Chapter 9 – Aviation

The main air facility in southwest Missouri is the Springfield-Branson National Airport. This is the primary air connection to the national and international markets. The region also has a private aircraft airport, the Downtown Airport, which coupled with the general aviation facility at the Springfield-Branson airport, serves the charter and private aircraft needs for the community. Additional commercial airports that also serve the Springfield region include Branson, Joplin, Tulsa, Northwest Arkansas, Kansas City, and St. Louis.

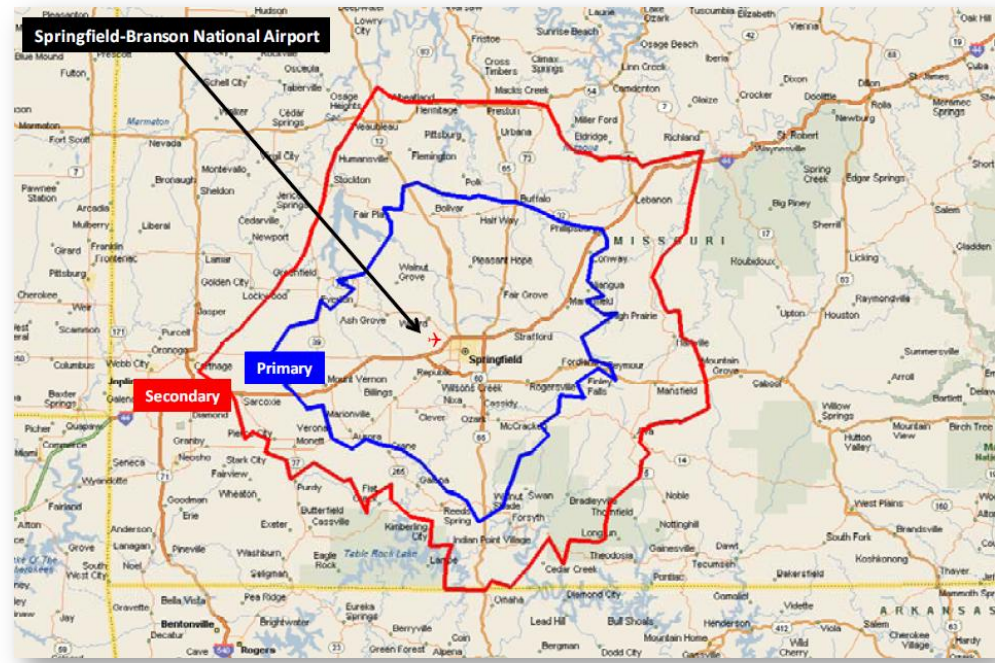
According to the Boeing Current Market Outlook, nationally, passenger air traffic rose 8 percent in 2010, after a 2 percent decline in 2009. Traffic is projected to increase in 2011 and at least maintain the historical growth rate of 5 percent for the next 5 years. Low-cost carriers continue to see growth, even in 2009 when there was overall decline. Springfield is served by Allegiant Airlines, a low cost carrier that connects Springfield to specific markets and offers no connecting service beyond those destinations. The network carriers have consolidated their service through mergers. The top four US airlines include American Airlines, Delta, Southwest, and United. Southwest Airlines is the only one that does not serve the Springfield-Branson National Airport. These four airlines control 80 percent of the capacity in the US. The Current Market Outlook projects that this will lead to increased stability in the air travel market.

Springfield-Branson National Airport

The Springfield-Branson National Airport is owned by the City of Springfield and managed by an 11 member administrative board, appointed by the Springfield city manager, with confirmation by the City Council. The Airport Board has the power and duty to operate the airport and related facilities, including day-to-day care, as well as supervision and custody of airport activities and properties. They can also acquire property, hire

Figure 57 - Airport Service Area

Source: Draft Airport Master Plan, June 28, 2011



employees, and adopt by-laws, rules, and regulations for the control and management of airport facilities with approval from City Council. The City of Springfield does not contribute local tax revenues or general funds to the airport, meaning the airport must operate as a self-sustaining facility. The Airport does, however, contribute to the local tax base through sales and the car rental agencies.

The draft Airport Master Plan estimates that 400,000 people live within a 45-minute drive of the airport and an additional 393,000 live within a less than two-hour drive. As of December 2010, there were ten destinations for air service from Springfield:

- Atlanta
- Chicago O’Hare
- Dallas/Fort Worth
- Denver
- Las Vegas
- Los Angeles
- Memphis
- Orlando
- Phoenix
- St. Petersburg, FL

Air service in Springfield is dependent upon the hub market which connects the major airlines to additional destinations nationwide and internationally. Allegiant Airlines, which flies direct to Las Vegas, Los Angeles, Orlando, Phoenix, and St. Petersburg, is the only airline which does not offer any connecting service to onward destinations. Dallas/Fort Worth is the only destination with enough demand to support nonstop, point-to-point service. Two Allegiant destinations serve the most passengers per day – Las Vegas and Los Angeles. Dallas/Fort Worth is third, but the first for the major commercial airlines.

The airlines and destinations serving the Springfield-Branson National Airport have been varied over the previous decade, but through 2007, and even into 2008, there has been growth in the passengers and flights serving those passengers. The downturn of the economy in 2008 has affected the industry overall. The number of passengers flying through the airport has decreased since 2007. The number of flights has also been reduced since 2007. Revenue passenger-miles have grown, however. This could be due to the addition of destinations which are further from Springfield, such as Los Angeles.

Table 28 - SGF Passenger Data

Source: Bureau of Transportation Statistics T-100 Market data
http://www.transtats.bts.gov/Data_Elements.aspx?Data=1

YEAR	Revenue Passenger-miles (SGF)	Percent Change	Passengers (SGF)	Percent Change	Load Factor (SGF)	Percent Change	Flights (SGF)	Percent Change
2000	82,195		264,207		54		6,909	
2001	71,402	-13.13%	226,217	-14.38%	54.25	0.46%	6,716	-2.79%
2002	80,024	12.08%	247,231	9.29%	59.23	9.18%	7,768	15.66%
2003	112,546	40.64%	311,662	26.06%	70.37	18.81%	9,904	27.50%
2004	149,158	32.53%	351,253	12.70%	69.36	-1.44%	10,826	9.31%
2005	204,037	36.79%	431,668	22.89%	69.23	-0.19%	12,450	15.00%
2006	213,121	4.45%	426,115	-1.29%	74.9	8.19%	11,164	-10.33%
2007	226,504	6.28%	430,578	1.05%	72.35	-3.40%	11,362	1.77%
2008	207,931	-8.20%	376,887	-12.47%	68.31	-5.58%	11,030	-2.92%
2009	232,904	12.01%	395,396	4.91%	75.51	10.54%	9,986	-9.47%
2010	235,755	1.22%	378,150	-4.36%	74.85	-0.87%	9,600	-3.87%

Midfield Terminal

The new midfield terminal opened in May of 2009 and was built with expansion in mind. The previous terminal had capacity issues and was not designed with the current security requirements in mind. The new terminal was built with 10 gates in operation, but can grow to 60 gates at full operation. Having been designed post-9/11, the new terminal also has the appropriate accommodations for the new security measures. Besides containing ticketing and baggage claim, the new terminal has currently facilities for five rental car companies – Avis, Budget, Enterprise, Hertz, and Thrifty.

General Aviation

The general aviation facility at the Springfield-Branson National Airport serves all the additional flights at the airport that are not part of the scheduled passenger flights or related to cargo. The Airport owns 8 hangars with 36 aircraft stalls. The City of Springfield also owns and leases hangar space. The general aviation facility at the airport is near capacity, however, additional development will not occur until the land at the former Air Park South location in Ozark is sold. Aircraft parking is available in addition to the hangar space.

Air Cargo

The Springfield-Branson National Airport also supports cargo. The cargo facilities are utilized by UPS, FedEx, BAX Global, U.S. Customs, and Eagle Global Logistics. The cargo facility is considered a Foreign Trade Zone. This allows for deferment of U.S. Customs' duty payment until goods are sold in the United States.

Surface Transportation

The new midfield terminal was constructed in a different location on airport property, which required access from a new network of roads. Whereas the prior terminal was the terminus of Kearney Street, the new terminal required the construction of a new roadway, Airport Boulevard, and access from Chestnut (Route 266) and Division (Route EE). The general aviation facilities are located along General Aviation Boulevard, and can be accessed from West Kearney. These two access points can be seen in Figure 49.

Farm Road 103, which is a road that exits Willard and heads south toward EE, has seen an increase in traffic since the new terminal and airport access road have been constructed. The OTO Major Thoroughfare Plan classifies the road as a secondary arterial, but the Federal Functional Class has been that this is a local street. OTO has reviewed and approved that an application be made to upgrade the classification to a collector. The designation of a collector or above would allow the roadway to be eligible for federal funding when making the necessary future improvements.

Downtown Airport

According to OzarksWatch Video Magazine, the Downtown Airport was one of the first airports in the Ozarks region. The City of Springfield bought the land where the airport is located in 1928, paying \$55,000 for approximately 360 acres. The terminal building was built in 1929 and is now the Alpha House on East Division. The airport has played host to a number of important dignitaries and aviators and served as a link to medical care during World War II. The Park Board were the designated managers of the airport. Half of the original airport has now become the Cooper Sports Complex. Road access to the Downtown Airport is from East Division, between U.S. 65 and Glenstone. The Downtown Airport now has one runway, which has gotten longer over time and can accommodate most modern private aircraft.

Figure 58 - Airport Access

Source: OTO Major Thoroughfare Plan

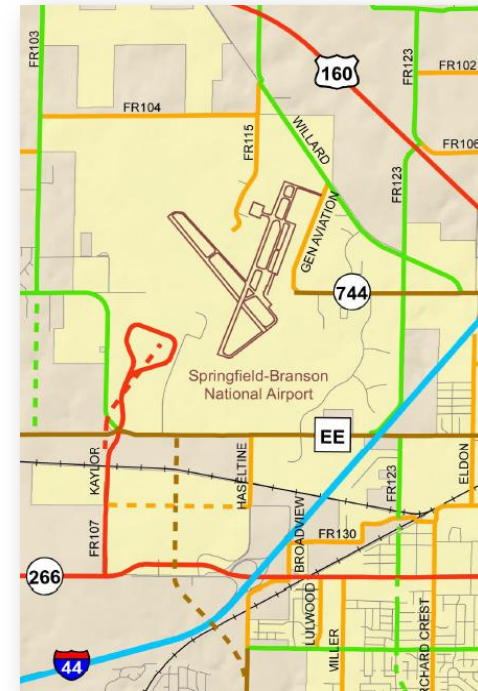


Figure 59 - Downtown Airport Location

Source: Wikimapia

<http://wikimapia.org/99028/Springfield-Downtown-Airport-3DW>



Land Use Considerations

Existing Land Use

Existing land use around the Springfield-Branson National Airport is mostly residential and rural, as well as industrial. Partnership Industrial Center West is located between the airport and I-44. Nearly 50 percent of the sites are now occupied. Some commercial is also located along Chestnut which is a major east-west road to the south of the airport.

Figure 60 - Springfield Airport Overlay Districts

Source: Springfield Zoning Ordinance

http://www.springfieldmo.gov/zoning/pdfs/ZO_041811.pdf

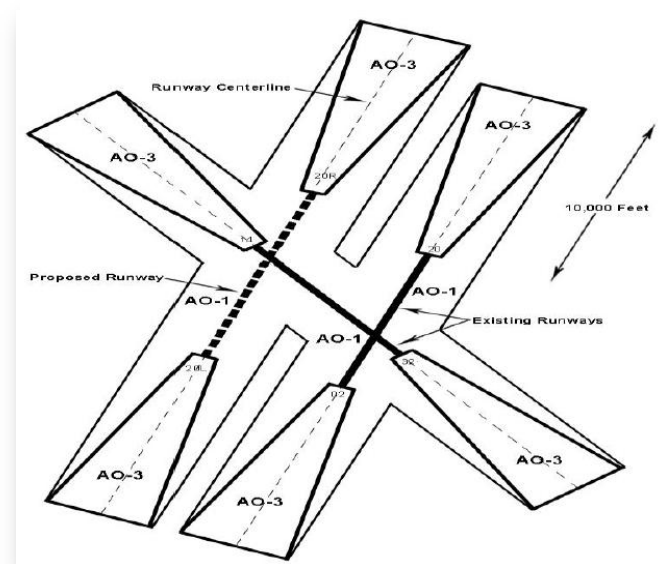


Figure 61 - Springfield Zoning around Airport

Source: City of Springfield

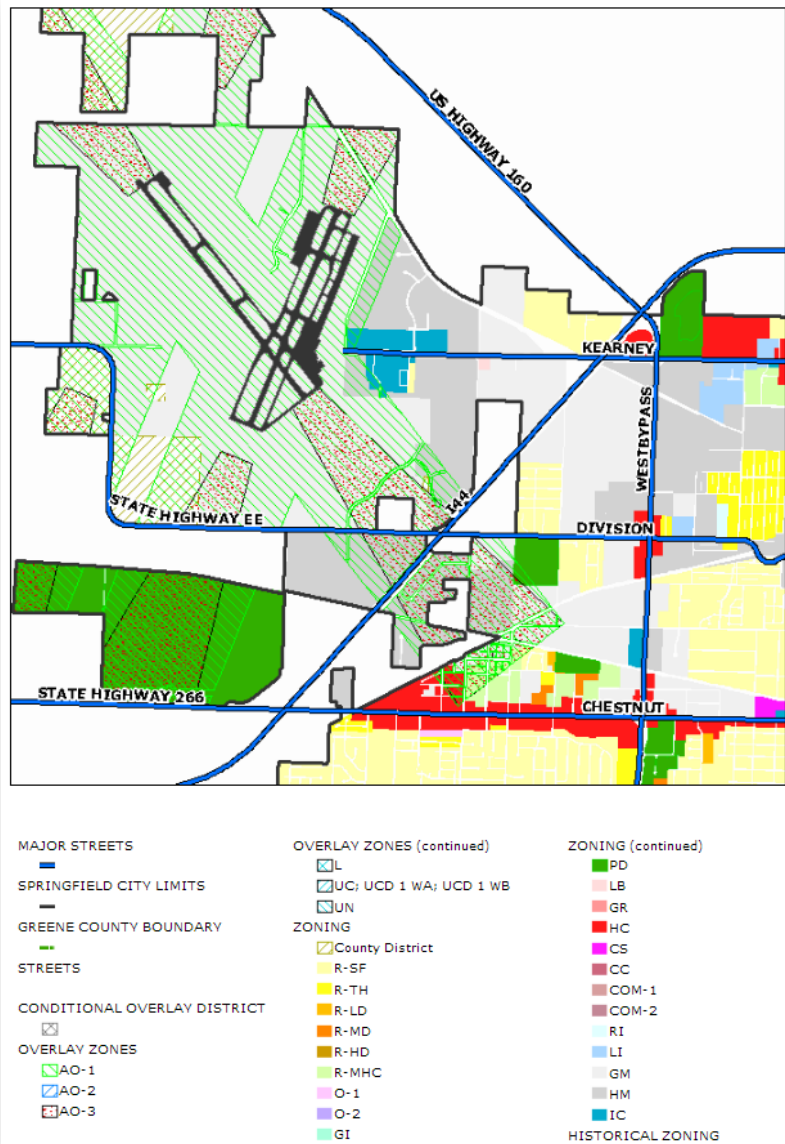
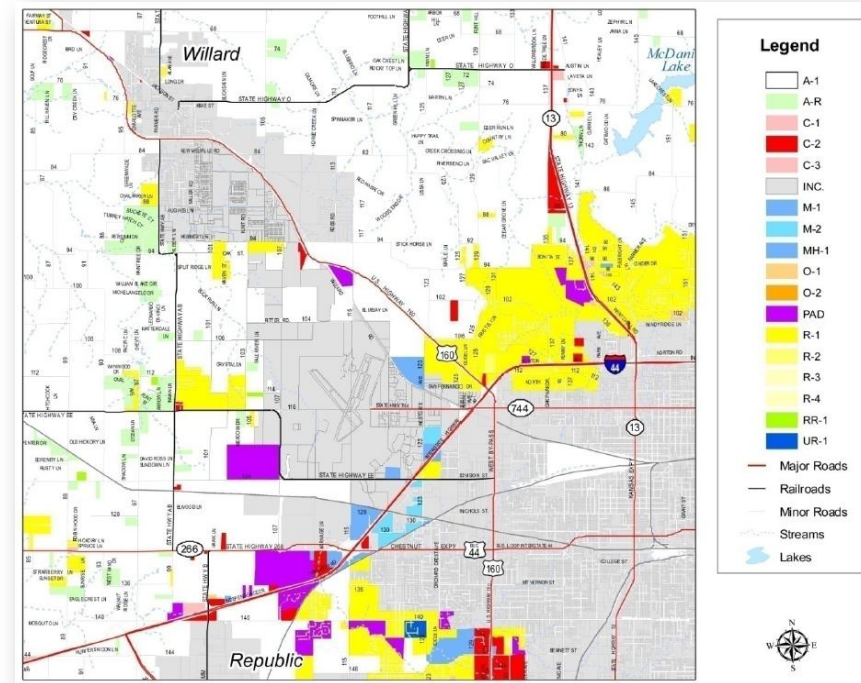


Figure 62 - Greene County Zoning around Airport

Source: Greene County



Zoning

The existing zoning near the airport, yet outside of the city limits, is mainly agricultural, with some residential. The area to the south of the airport is zoned industrial, while that to the northeast is mainly residential. Commercial is concentrated on Chestnut, with some along Kearney, near West Bypass. The City of Springfield also has airport overlay zones that extend beyond the runways. The Airport Overlay Zoning District 1 prohibits residential, public uses, and recreational uses. Airport Overlay Zoning District 3 supersedes AO-1 and restricts land use to single-family on minimum 10-acre tracts and limiting the height of structures on those lots. Greene County has a similar airport zoning district, restricting uses and heights of structures. Both City and County

zoning districts also govern the transmission of radio signals, electronic emissions, and lights.

Noise Impacts

Noise is a concern surrounding airports. The Federal Aviation Administration (FAA) has established criteria to help protect public health and safety, though the Airport has no noise abatement procedures of its own, due its somewhat rural location. This includes Day-Night Sound Level (L_{dn}) contours as a guide to identify areas susceptible to noise from aircraft operations. The FAA also looks at factors such as noise duration, number of aircraft operations, flight paths, and time of day. These criteria are based on known effects of noise on people, such as hearing loss, communication interference, sleep interference, physiological responses, and annoyance. According to the FAR Part 150 Land Use Compatibility Matrix, residential land use is deemed acceptable for noise exposures up to 65 L_{dn} . Certain sensitive land uses, such as hospitals, nursing homes, churches, auditoriums, and concert halls, must have structures that are compatible to noise level readings of 25-35 decibels. The Land Use Compatibility Matrix is meant to be used in conjunction with the noise level contours which specify a maximum amount of noise exposure (L_{dn}) that will be considered acceptable or compatible with people living and working within these areas. The new noise level contours for the Springfield-Branson National Airport have not yet been incorporated into the new draft Airport Master Plan. The current contours date back to 1988, forecasted to 2000.

The FAA notes that the responsibility for determining the acceptability and permissible land uses remains with the local authorities. It is important that Greene County and the City of Springfield continue their existing airport zoning policies. As a general rule, land within any of the defined noise contours (65-75 L_{dn}) should not be zoned to allow construction of residences, hospitals, theaters, outdoor amphitheaters, or other noise-sensitive uses. Such uses may be permitted, however, if a detailed noise analysis is conducted and noise control features are included in the building design.

Strategy to Implement Plan Goals

- ***The City of Springfield and Greene County should continue the existing zoning patterns in effect around the Springfield-Branson National Airport. No rezoning of agricultural land use to noise-sensitive uses should be allowed within the noise contours unless a noise analysis is conducted and noise control features are included in the building design.***
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Table 29 - Suggested Land Use Compatibility for Airport Development

Source: FAR Part 150, <http://www.risingup.com/fars/info/part150-A-APPX.shtml>

Land use	Yearly day-night average sound level (L _{dn}) in decibels					
	Below 65	65–70	70–75	75–80	80–85	Over 85
Residential						
Residential, other than mobile homes and transient lodgings	Y	N ₍₁₎	N ₍₁₎	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N ₍₁₎	N ₍₁₎	N ₍₁₎	N	N
Public Use						
Schools	Y	N ₍₁₎	N ₍₁₎	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y ₍₂₎	Y ₍₃₎	Y ₍₄₎	Y ₍₄₎
Parking	Y	Y	Y ₍₂₎	Y ₍₃₎	Y ₍₄₎	N
Commercial Use						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y ₍₂₎	Y ₍₃₎	Y ₍₄₎	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y ₍₂₎	Y ₍₃₎	Y ₍₄₎	N
Communication	Y	Y	25	30	N	N
Manufacturing and Production						
Manufacturing, general	Y	Y	Y ₍₂₎	Y ₍₃₎	Y ₍₄₎	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y ₍₆₎	Y ₍₇₎	Y ₍₈₎	Y ₍₈₎	Y ₍₈₎
Livestock farming and breeding	Y	Y ₍₆₎	Y ₍₇₎	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y ₍₅₎	Y ₍₅₎	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 or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

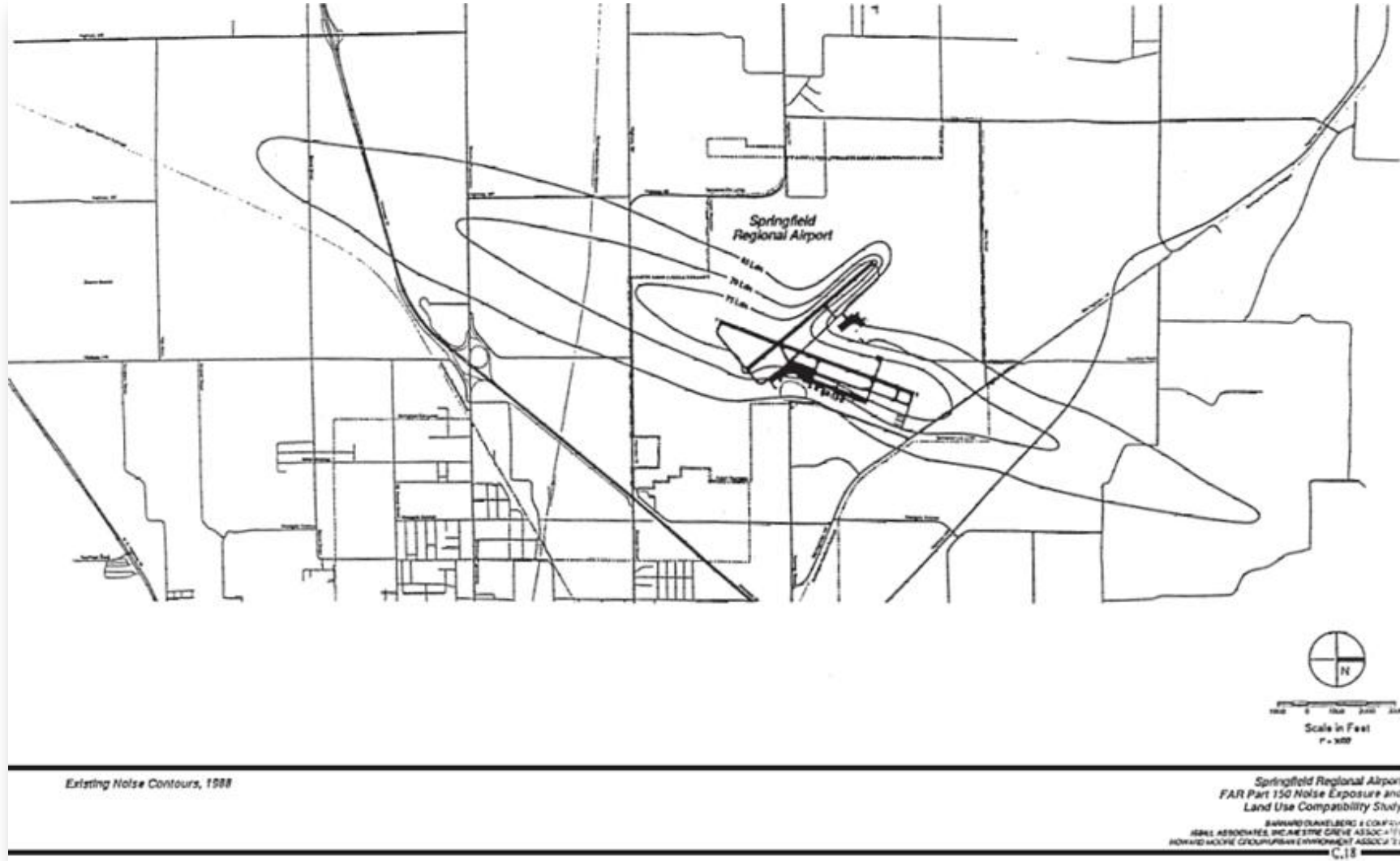
Key to Table 29

SLUCM	Standard Land Use Coding Manual.
Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	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 for Table 29

- (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 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 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 level is low.
- (5) Land use compatible provided special sound reinforcement systems are installed.
- (6) Residential buildings require an NLR of 25.
- (7) Residential buildings require an NLR of 30.
- (8) Residential buildings not permitted.

Figure 63 - Springfield-Branson National Airport Noise Contours
Source: Journey 2030



Current land uses appear to be in keeping with the previous noise contours. Having updated contours in the new Airport Master Plan will be key to ensuring this compatibility in the future.