

## Case Study: Developing San Antonio's "Broadway Corridor"

by Lance Freeman and Eliot Allen

San Antonio, Texas is widely known for its successful downtown development that brings seven million visitors annually to attractions such as the Alamo and River Walk. Four miles long, the Broadway Corridor is currently home to 12,000 residents and 13,000 workers. The area enjoys an extraordinary collection of community assets, including the local zoo, botanical gardens, two museums, and a university. It also has more than 140 acres of vacant land and dozens of redevelopable properties, making it attractive for infill and economic growth.

The planning effort is distinguished by the way in which GIS brought diverse interests together to work collaboratively on a common vision for the area. In recent years, several community groups were independently looking at problems and opportunities along the Corridor. Instead, they are now jointly using GIS to find common ground. The following are examples of shareholder interests:

- A local group of architects designed an evaluation that was prompted by the Corridor's valuable inventory of redevelopable and historic buildings that could be reached by an extension of the River Walk.
- The city planning department saw the Corridor as an ideal location for testing the "smart growth" provisions of its new uniform development code that encourages redevelopment of established neighborhoods.
- Because Broadway Avenue has unused traffic capacity, the city public works department was interested in multimodal transportation improvements to encourage walking, biking, and transit. Additional transit use was also the goal of VIA Metropolitan Transit, the local transit operator whose goal is increasing ridership while supporting economic growth.
- The Alamo Area Council of Governments, in its capacity as the regional data center, saw the project as an opportunity to better define interactions between land use, transportation, and the environment.

The catalyst for bringing those shareholders together was an offer from the U.S. Environmental Protection Agency (EPA) to apply Smart Growth INDEX, a GIS-based planning support tool that EPA is distributing nationally to selected communities. Smart Growth INDEX was developed for EPA by Criterion Planners/Engineers (an ESRI Business Partner) of Portland, Oregon, as a customization of Criterion's INDEX software series. The firm builds custom INDEX applications using ESRI's MapObjects and ArcView.

With help from the EPA's Dallas regional office and the Washington, D.C., headquarters staff, the San Antonio shareholders used INDEX to examine ideas and synthesize their visions and goals into a single, consensus-based plan. INDEX rates planning scenarios with a set of indicators that measure a scenario's performance in land use, transportation, urban design, and environmental terms. Example indicators include residential and employment density, walking distances to neighborhood amenities, and air pollutant emissions.

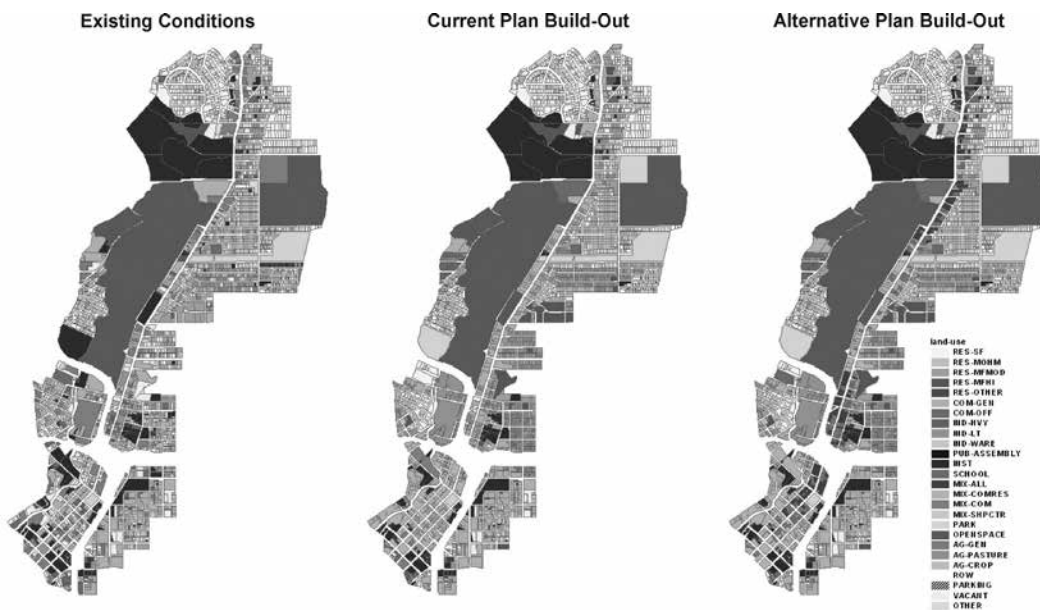
According to VIA's Project Manager Lance Freeman, "This type of GIS application is a great example of how the technology can bring diverse interests together and help build consensus. Previously, we had multiple viewpoints competing for people's attention. INDEX knits these together so that people can see the sum of the parts." Working collaboratively, stakeholders completed the following activities under the direction of the local chapter of the American Institute of Architects:

- The kickoff was a neighborhood planning workshop to solicit concerns and ideas from 75 residents and businesses in the area. This session produced valuable outlines of several potential futures that were later distilled into a preferred concept plan.

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- A single database for the area was assembled from shareholder organizations. This process was significantly enhanced by the use of ArcGIS 8.1. Freeman observed, "With data coming in from so many sources, we couldn't have met our deadlines without version 8.1's direct reading of multiple data formats and advanced editing tools. We saved several days of work with the power of version 8.1."
- INDEX modeling was performed on three cases: (1) existing conditions to be used as benchmarks for evaluating alternative plans, (2) build-out of several current official plans for the areas that promote traditional auto-oriented uses, and (3) build-out of the workshop's preferred plan that promotes a mix of uses served by a multimodal transportation system. The objective was to determine which plan was most responsive to shareholder goals. See Figure 1.
- Shareholders reconvened to examine INDEX results, make refinements to their strategy, and prepare for the next implementation steps. A key component of the modeling was the use of ArcView Network Analyst. This ArcView extension is used in INDEX to simulate multimodal travel conditions in a study area that includes walking, biking, and transit. For each urban design scenario, ArcView Network Analyst is used to quickly gauge travel mode availabilities, distances, and route directness. As a result, every household and business in the area can be accurately characterized in terms of accessibility to essential services and amenities. According to Eliot Allen of Criterion Planners/Engineers, "With ESRI's help, we've been able to develop ArcView Network Analyst into an essential diagnostic tool that truly integrates land use and transportation planning at the neighborhood level."

Figure 1. San Antonio's Broadway Corridor



San Antonio's Broadway Corridor was modeled three ways in INDEX: existing conditions, current plan build-out, and stakeholders' alternative plan build-out. The latter emphasizes mixed live/work/shop land-uses where the current plan focuses on auto-oriented strip commercial.

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The final INDEX "report card" for the Corridor produced several important findings. First, it confirmed the area as worthy of attention for redevelopment. Of the 40 INDEX indicators, one-quarter of them already scored favorably under existing conditions, and only five were rated unfavorable. Second, it showed that the current official plan for the area would lead to some, but not major, improvements over existing conditions. The number of indicators scoring in the favorable range increased by only one, and the number in the unfavorable range decreased by only one. Most important, it revealed that the shareholders' new proposed plan would create much better conditions than the current plan. The number of favorably scored indicators jumped to 17, and the

unfavorable count dropped to only three. In this way, the GIS tool gave participants rapid, critical feedback on the validity of their work to date and the promise of their future efforts.

Following the review of initial INDEX results, organizations have continued to improve the area's database and to model additional variations of the basic concepts. Emphasis is being given to public information and agency coordination in anticipation of program and capital improvement commitments during 2002.

*Source:*

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