

Texas Historic Sites Atlas

Historic Site Information on the WWW

Screen captures by the authors.

Texas' historical records are scattered almost as widely as the sites they document—thousands of site forms and photographs are warehoused in museums, libraries, and archives across the state. To improve access to historic site documentation and facilitate historic preservation, the Texas Historical Commission (THC) recently compiled these records in a single, Internet-accessible database and mapping system, called the Texas Historic Sites Atlas <www.thc.state.tx.us/atlas>. The Atlas documents more than 220,000 historic and prehistoric sites, and can dynamically plot site locations on a variety of digital base maps. Most importantly, the Atlas delivers these maps, site records, and photos to planners, preservation professionals, and the public through the World Wide Web.

To make the Atlas an authoritative preservation tool, the THC collaborated with universities and local preservation groups to collect Texas' historic site records, regardless of record date or origin. Atlas data sources include 166 unique site forms from more than 17 state repositories and community archives, as well as the THC's in-house files. Collecting this information was the first priority of the Atlas development staff; it proved to be the longest and most expensive task of this \$1.5 million ISTEAF-funded project.

Our approach to data collection was simply to reproduce whatever documentation each archive had to offer. To preserve the recorder's observations, we chose not to standardize or modify the data to fit a single template. Instead, we created data sets and data-entry applications to match the fields on each archived form we encountered and transcribed the infor-

mation directly from the original records. This approach made data entry much faster, easier, and less expensive. We also took advantage of information already available in a computerized format, such as National Register data. This information was combined with property descriptions from the THC's National Register Division files. To save time, our data-entry team scanned and converted these property narratives to text using optical character recognition (OCR) software. We also obtained thousands of historic resource survey files in database format from cultural resource management firms in Texas. The Texas Forestry Museum supplied us with a database of 4,000 historic sawmill records, and the Texas Department of Transportation provided databases of historic bridges, roadside parks, and Depression-era structures.

Some sets of data now in the Atlas have never before been available in electronic format. Archeological site data entry was performed under contract by the Texas Archeological Research Laboratory (TARL) at the University of Texas, which curates archeological records, maps, and artifacts. Archeological data collection involved transcribing data from site forms, scanning accompanying sketch maps, and digitizing site locations from USGS quadrangles. Site locations were recorded as coordinates in database tables, rather than digitized directly into a GIS map layer.

Data collection at the THC proceeded concurrently with the TARL contract; a team of data-entry workers transcribed National Register survey cards, Historical Marker files, and other records in the THC archives. They also scanned photos of most historic sites. These images were saved as JPEG or GIF format files at low resolution: this kept the individual file size to a minimum. An experienced operator could pull, scan, and re-file 100 images per hour.

The initial data collection phase lasted almost two years; this was the most expensive task of the project. The archeological data-entry contract with TARL cost approximately \$500,000; we spent an additional \$120,000 to employ data-entry workers at the THC. In comparison, computer hardware and software expenditures have totaled \$140,000. Data-entry costs for each archeological site form was \$5.94; for marker files and property

A county search form. You can select multiple site types to generate lists of a county's historic resources.

Select Search Criteria

1. Choose a county from the list below, or pick it from a [state map](#):

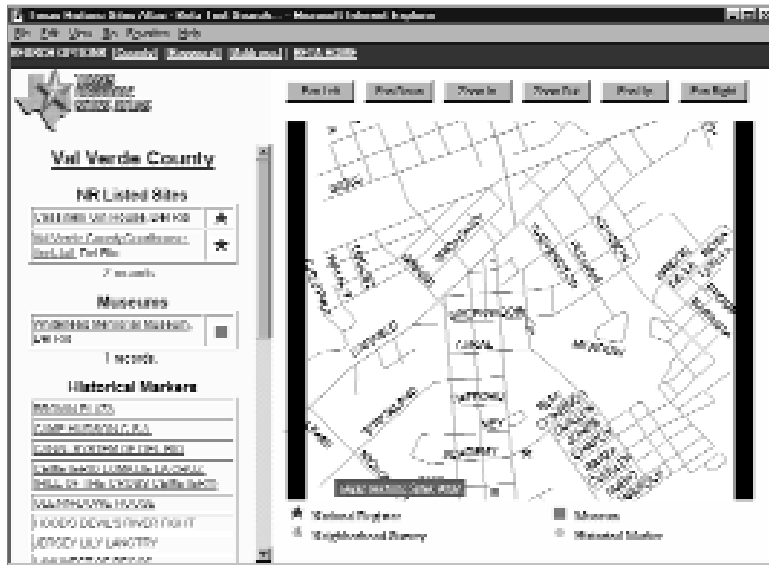
Val Verde

2. Check the site types you want to search:

NR Properties
 Neighborhood Surveys
 Sawmills
 Museums
 Historical Markers

3.

The results of a map request (right). The site you select is plotted at the center of the map, and the area displayed can be zoomed or panned left and right by clicking the buttons at the top of the screen. The Atlas currently plots historic site locations on county highway maps developed by TxDOT. In the future, more detailed topographic base maps will be available.



To manage the mapping data, we use MGE®, a Geographic Information System (GIS) package from Intergraph. Another Intergraph product, GeoMedia Web Map®, generates and delivers historic site location maps over the Web. For base maps, we were able to use county highway maps produced by TxDOT. However, because these digital maps were created for paper map production, the data required a great deal of manipulation to make it suitable for use in our system.

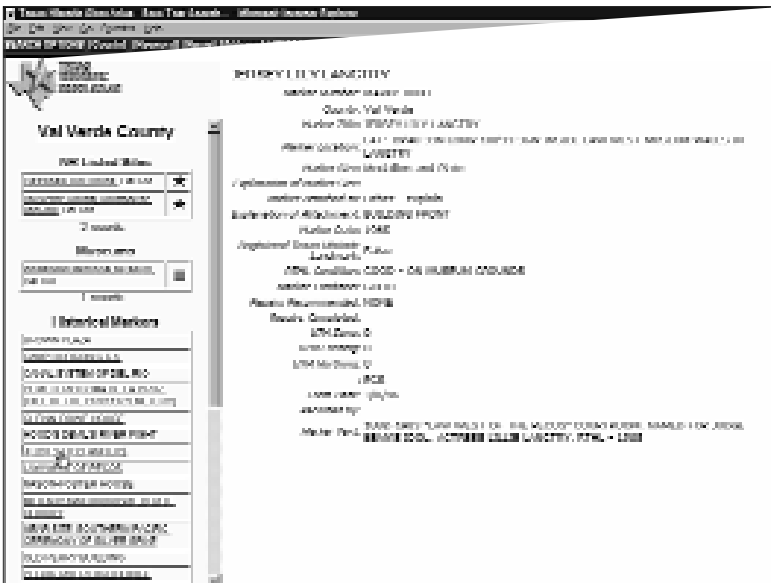
An important phase of Atlas development was building the user interface; this included

designing Web pages, writing scripts for database queries, and configuring mapping software. Last year, we went online with a beta test site. This gave us time to troubleshoot and record user comments and suggestions. More than 1,000 people registered to test the Atlas, and in one typical week our test site handled 117 user sessions, 227 user queries, and 102 requests for historic site maps. Due to legal concerns, the public version of the Atlas does not include access to archeological site records. Archeological data users must be granted a password-controlled account to gain access to the data.

The official announcement of the Texas Historic Sites Atlas is slated for spring 1998. We will continue to add new data sets and modify the user interface to enable more sophisticated types of database queries. We plan to improve the base map data by adding digital versions of quadrangle maps, called Digital Raster Graphics (DRG) files, recently completed by the USGS. Whether Atlas users search our records for entertainment, education, or historic preservation, they can browse Texas history—without ever leaving home.

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The full-screen results of a site form request (above). Both the maps and the site form data are displayed on the right side of the screen, while the search results remain on the left.

survey cards, \$3.67 per form. Digitizing site locations from more than 4,400 USGS quadrangles cost \$4.00 a map; scanned images cost \$0.93.

Hosting this data requires technical expertise and substantial hardware. At the present time, Atlas resides on two networked computers, a Web server running Microsoft Internet Information Server 3.0®, and a database server running Microsoft SQL Server 6.5.® The database server has approximately 15 GB of storage (currently being upgraded to 90 GB). The Atlas Web site contains a variety of forms to obtain historic site information. These forms launch CGI scripts (written in Perl) which query the database server; the user receives the formatted results. Most scripts return a list of sites satisfying the search criteria. The user can then choose to view the complete site form data or a map of the site vicinity. Users can also click a digital map interface to select a county or smaller area for close examination.