Paving the Way for STEM in History Museums
Constructing a Narrative: Writing about STEM for a Specific Audience
Webinar Goals

- Learn practices in writing for accessibility, readability, and voice.
- Explore how to use these strategies in onsite and online applications to incorporate STEM topics into history exhibits.
- Practice different methods for clear and concise writing for your institution's primary audience using road construction as an example.
Overview

- Audience
- Accessibility
- Readability
- Voice
Audience

- How do you determine your primary audience?
- What if you have more than one?
- What can you learn about them and how can you do that?
**Audience**

- Will your exhibitions look different because of this primary audience?
- What choices will you make about your writing style because of who they are?
Accessibility

- Think of ADA compliance as only the beginning
- How does the physicality of your space impact the way that your audience reads your narrative?
Accessibility
Readability

How does the visual design help visitors to understand what is important?

What hierarchy of information are you creating?

Cultural Crossroads

Intersección Cultural

Gone to Texas! It is a phrase that captures the extraordinary growth of Texas between the Civil War and the Civil War. A new state with abundant and inexpensive land, the lure of Texas was irresistible for thousands of people. The state's first census in 1840 counted 142,000 Texas residents. By 1860, the population more than quadrupled. Texas' remarkable expansion resulted in a cultural crossroads as Tejanos, settlers from the United States and Europe, enslaved Africans, and American Indians (though not included in the census number) all contributed to the cultural legacy throughout the state.

Desegregated Shopping

Compras Desagregadas

Foster's Department Store in downtown Houston was the site of some of the first local sit-ins and desegregation protests in Texas. Bob Foster, Foster's Senior Vice President, promptly responded to the protests by working with Black community leader Robert Taylor and Houston Chronicle publisher Jack J. Press to swiftly integrate all 19 of Houston's lunch counters on the same day - August 29, 1960. This coincided with local media's report on 6 for one week, highlighting the increasing racial violence that had evaded attention in most Southern cities.

Map of Bell County

The local growth of the socalled Fredd Family can be seen on this map of Bell County in the map's lower middle quadrant. (see map below) After receiving the initial grants, the Fredd family continued to acquire land in the same general area.

Las construcciones de ferrocarril de transcontinental (trenes de pasajeros y mercancías) en el distrito de Bell, en el estado de Texas, han estado integradas en la historia del desarrollo de este área. (vea el mapa inferior) Después de recibir los subsidios iniciales, la familia Fredd continuó adquiriendo terrenos en el mismo territorio general.
The big black dog ferociously attacked and sank his teeth into the mailman and ran away with his delicious pastrami and egg sandwich.

54.8

The big black dog bit the mailman and stole his sandwich.

95.7

From “The Writer” online readability checker
### Table 22: Roadway Segment Subtypes by Time Period.

|------------------|--------------------------------------------------|--------------------------------------------|---------------------------------|-------------------------------------|

- **Initiation of the Highway System: 1917–1932**

  Roadway segment along Page Street, Redwater, Bowser County, constructed ca. 1920. Photo by HFM.

  Character-defining Features:
  1. Shortest and most feasible route used.
  2. Road width approximately 22 feet.
  3. Paving consisting of concrete slabs.
  4. A high-crown surface is used for drainage and joints for expansion and contraction of roadway materials.
  5. Relatively narrow shoulders constructed of stable materials (such as asphalt or gravel).
  6. Striping consists of a black line down the middle of the roadway.

- **Depression, Mobilization, and War: 1933–1944**

  Roadway segment along E. Avenue G, Penwell, Ector County, constructed ca. 1940. Photo by HFM.

  Character-defining Features:
  1. Shortest and most feasible route used.
  2. Road width approximately 22 feet.
  4. Paving consisting of bituminous concrete (later known as asphalt).
  5. Shoulders constructed of stable materials (such as asphalt or gravel).
  6. Striping consists of a black line down the middle of the roadway.

- **Postwar Road Expansion: 1945–1956**

  Roadway segment along Great Street north of US 69, Victory of Greenville, Hunt County, constructed ca. 1946. This segment served as a spur providing a more direct route between downtown Greenville and US 69. Photo by HFM.

  Character-defining Features:
  1. Shortest and most feasible route used.
  2. Road width approximately 22 feet.
  4. Paving consisting of bituminous concrete (later known as asphalt).
  5. Shoulders constructed of stable materials (such as asphalt or gravel).
  6. Striping consists of a broken white line down the middle of the roadway.
Voice

● What if you are talking about the same topic across a variety of platforms?
● How can you ensure that you have a consistent voice in your exhibition text vs online content vs programming?
● What does a consistent voice even mean?
This Good Roads Amendment, which was actively supported by Governor Coke Stevenson, the Texas Good Roads Association, and other road organizations, prevented road funds from being redirected to other governmental agencies. Three-quarters of these revenues were reserved for highway construction, maintenance, and administration of highway laws, while the remaining one-quarter was allocated to the Available School Fund (money set aside by the state from current or annual revenues to support the public school system).

In 1947, further legislation was enacted that changed the 1941 bond assumption law so that any surplus over $2 million in the county and district road indebtedness fund would be allocated to the state highway fund. Moreover, the legislature enabled local and county governmental units to contribute funds to the THD, if they chose, in order to accelerate road construction during the postwar period. This commission policy was commonly referred to as the 75-25 program, outlined in Minute Order 23476 and passed by the legislature on June 2, 1947. This program accepted funds from counties for 75 percent of the construction cost for FM roads, up to a maximum of $100,000 per year. The state then provided the remaining 25 percent of the costs. Under the 75-25 program, 2,788 miles of FM roads were constructed in 93 counties at a cost of approximately $32.5 million. The 75-25 program proved to be a short-term solution for new road construction. It was discontinued in 1949 with passage of the Colson-Briscoe Act.

With available funds, Texas was in a good position to act quickly in their postwar building efforts, while other states in the country found it difficult to raise the matching funds required by the Federal-Aid Highway Acts. By mid-1947 Texas accounted for one-quarter of all highway work under contract in the country, due in part to its head start in planning and reserve of available funds.

By 1948, revenue from the gasoline sales tax and enforcement of license fees had reached its highest point in department history, and it was estimated that there would be enough funds to match federal aid and a small amount left for the betterment of roads with 100 percent state funds. Annual spending on Texas roads and bridges continued to rise during the postwar period, equaling more than $100 million in 1952, topping $200 million beginning in 1957, and exceeding $300 million after 1963. In addition to the funding mechanisms described above, a portion of funding for roads was also generated through vehicle registrations. The state's vehicle registrations nearly doubled in the years after the war, providing increased transportation funds. In 1945, 1.7 million vehicles were registered, a total that increased to 3.1 million in 1950.
Imagine you are a farmer with a cotton crop ready for market. It has been raining for two weeks, and the only road between you and town is a soupy mess. That often was the reality for Texas farmers before 1949.

In the late 1930s, the Texas Highway Department started paving the dirt roads between farms and the towns where they sold their goods. In 1949, the state government set aside $15 million a year to construct roads that would “get the farmer out of the mud.” By 1957, the farm-to-market (FM) road system was 30,000 miles long. Today, farm-to-market roads account for over half of the Texas highway system.
Voice (on website, broad)

**TEXAS HIGHWAYS**

Paving the Way

In 1925, the newly appointed highway commissioner and state highway engineer prepared an $385,000-project network of state highways, planning a 10,000-mile network of state highways that eventually would be extended to 14,000 miles of road in Texas were paved.

Early Trails and Roads

Developing the Farm-to-Market System

In the late 1930s, the Texas Highway Department began designing a rural road system to connect farmers and towns where they sold their goods. Their goal was to “get the farmer out of the mud.” The roads within this system were called farm-to-market roads.

They were paved, compared to the dirt roads they often replaced, and had wider lanes and more efficient design. They would become the most developed rural highway network in the country, increasing by 33,000 miles between 1931 and 1961. Thanks to these paved roads, farmers had better access to services in nearby cities and people in urban areas had access to fresh crops and traveled outside of city centers.
In 1917, the newly appointed highway commission and state highway engineer proposed that an 8,865 mile network of state highways be built. At the time, none of the approximately 148,000 miles of road in Texas were paved and unreliable dirt roads connected farmers to nearby Texas towns.

Beginning in the 1930s, the Texas Highway Department began designing a rural road system and paving the dirt roads. In 1949, the state government set aside $15 million a year to construct roads that would “get the farmer out of the mud.” This system of roads was known as the farm-to-market (FM) system.

The Texas Highway Department constructed roads based on each county’s needs, but each FM road had to meet certain qualifications. FM roads:

- could not be a state highway
- had to serve rural areas and connect them to cities or towns
- had to help economic growth in the area and serve as public school bus or postal routes
- had to have at least one end connected to a previously improved road

FM roads would become the most developed rural highway network in the nation, increasing by 33,000 miles between 1951 and 1961. Thanks to these paved roads, farmers had better access to services in nearby cities and people in urban areas had access to fresh crops and could more easily travel outside of city centers. Today, FM roads make up more than half of the Texas highway system.
Voice (in social media posts)

Bullock Texas State History Museum

DID YOU KNOW? Farm-to-market roads were created to do exactly what their name implies.

More reliable, paved roads allowed farmers and ranchers across the state of Texas to get their goods to market when they needed to. The system which began in the 1940s continues to be fueled by state funds including a one penny tax on every gallon of gas purchased in the state.

DYK #farmtomarket roads make up more than half of the Texas highway system? Learn more about this uniquely Texan phenomenon >>
Join Us for An Activity!

Using physical materials that TxDOT has loaned to the Bullock Museum to represent layers of road construction materials, we’ll work together to create one 65-word label for our imagined audience.

Thursday, June 10 at 2pm or Friday, June 11 at 10am

Tell Us About Your Own Work!

Bring your institution’s STEM-based project in any stage of development and we’ll workshop it with colleagues across the state.

Thursday, July 29 at 2pm or Friday, July 30 at 10am