

Houston became known as a railroad hub for many types of goods and produce.
 Map from the Houston Texas Club courtesy of the Houston Metropolitan Research Center.

A Texas Tale of Logistics and Transport in the Land “Where 17 Railroads Meet the Sea”

By Maria G. Burns

A tribute to the forerunners of the Port of Houston, the fathers of the Texas trade and transport, the ones who endured hardships and overcame great obstacles, the ones who dreamed of making Texas all the things that it is today: A blessed land, and the global capital of energy, maritime, and logistics.

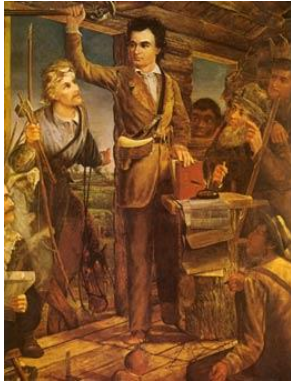
The art of Logistics pertains to the movement, coordination, and supply of humans, troops, and commodities. Its practice entails: warfare and military strategies; survival, i.e. emergency response/ contingency planning; and sociopolitical and economic sustainability. Contrary to popular belief, global logistics, trade, and transport were not invented in the 1800s. Instead, these millennia-old practices were re-invented over the history of mankind after significant technological, scientific, and sociopolitical changes.

The story of Houston, Texas, is one of persistence and overcoming adversities, all connected with logistics. From the founding of the first European settlements in Texas to the creation of transportation networks in the mid-1800s to the opening of the Houston Ship Channel in 1914 to the current state-of-the-art Port of Houston, transport and logistics have played a critical role in the region’s development and will continue to do so in the millennia to come.

The First European Colonies

In the early 1700s, the earliest European colonies in Texas consisted of Spanish missionaries who established San Antonio as a hub point. At the time, Texas was a sparsely inhabited land, due to its remote location from other Spanish or European settlements, unfavorable weather conditions, and wild flora and fauna. From the dawn of the eighteenth century, French merchants from New Orleans had penetrated the

undiscovered land from the west bank of the Mississippi River moving north of Galveston Bay along the Trinity and Colorado Rivers to trade with Native Americans, such as the Orcoquiza Indians.¹ By the 1790s, Native Americans, Hispanics, and Anglo-American hunters and traders called Texas home.



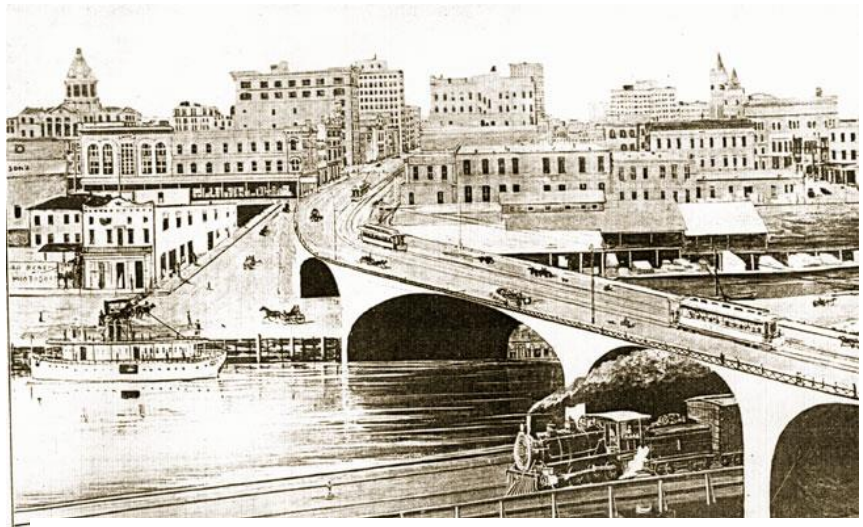
In the early 1820s, Stephen F. Austin created the first Anglo-American colony in Texas, consisting of 307 parcels of land, or 200,000 acres, located near Colorado and Brazos Rivers. Austin focused on recruiting educated family men, with trading and entrepreneurial skills, capable of making Texas a prosperous, industrious land. The majority of the men among the 297 original families were entrepreneurs who could read and write, a factor that determined the future of the settlement in comparison to most settlements where only one out of twelve men was literate. Their high competency level helped them prosper, and by the late 1820s, they had established an active trade and transport center.²

Stephen F. Austin, shown at left.

Nineteenth Century Logistics Networks

Once Texas became an independent republic in 1836, improving the state's trade and transport networks became a compelling need. The early settlers faced almost insurmountable challenges without local road systems or infrastructure. The cost of wagon transport to carry three bales of cotton was twenty cents per ton-mile, yet due to the poor road conditions, wagons could only travel for a few miles per day with significant delays and deviations. Therefore, the state mainly relied on its waterways to transport cotton, logs, livestock, textiles, and numerous other commodities in the region. Water routes were the only reliable means of transportation, and the coastal townships located in the vicinity of the sea or rivers grew substantially faster than isolated mainland settlements. It became evident that to boost the local economy, it was necessary to invest in transportation and logistics networks, and community leaders introduced initiatives to improve the roads, railways, and waterways.

Subsequent to the Civil War, the Houston Ship Channel in the absence of funds for deep-water dredging, focused on its regional railroad center. Even though the First Congress of the Republic of Texas had chartered the Texas Rail Road, Navigation, and Banking Company, the state had less than 500 miles of track in 1870. Within twenty years, though, railroad companies had added 8,000 miles of track. The railroads running through Houston



The Main Street Bridge over Buffalo Bayou.

bringing products for transport to the port in Galveston caused the city to be nicknamed the Hub City. By the 1910s, Houston was dubbed the city "Where 17 Railroad Meet the Sea."³

The nineteenth century introduced the Industrial Revolution and its most innovative technology, the steam engine, used by industries and transportation modes alike. Steam railroads and steam paddleboats surged, boosting the regional and national trade and transport networks. Steam-powered technologies gained increasing popularity for both the transport of passengers and commodities. While steam navigation

was desirable, Buffalo Bayou and most Texas rivers had draft restrictions, making them too shallow or wide for safe and sustainable transportation.

Transforming Buffalo Bayou into the Houston Ship Channel

In 1874, Commodore Charles Morgan, a dynamic, enterprising businessman contributed to Houston's development of a deep-water port. At the time, he was actively involved with Gulf Coast steamships and was a major stakeholder of railroad trade between Houston and New Orleans. While he had established long-term partnerships in other parts of the Gulf region, he was dissatisfied with the high municipal taxation rates, high pilotage, long layovers, and quarantine procedures that resulted in time delays and increased cost. Hence, he chose to relocate his business from the lower Mississippi, New Orleans, and Galveston to the Port of Houston.⁴

When Galveston was ravaged by the 1900 hurricane, the Port of Houston's expansion was prioritized to handle all regional cargoes that would otherwise navigate through Galveston. Determined local leaders argued for the necessity of dredging the Houston Ship Channel, but their efforts were unsuccessful until oil was discovered in 1901 at Spindletop near Beaumont, Texas.⁵

As the Port of Houston's cargoes shifted from timber and cotton to global oil trade, the ship channel required deep-water dredging to accommodate larger vessels. U.S. Congressman Tom Ball, Mayor H. Baldwin Rice, and other business leaders proposed a revolutionary plan whereby the dredging cost would be equally shared between Houston and the federal government.⁶ Congress accepted the "Houston Plan," and its concept was implemented in multiple U.S. ports. In 1902, President Theodore Roosevelt authorized funding for the ship channel, and in 1914, the dream became a reality.

The Houston Ship Channel Logistics in the Modern Era



Image courtesy of Port of Houston Authority

trade agreements, and enhanced supply chains to connect the port with nodal logistics points.

The Port's centennial coincides with the Panama Canal's centennial and initiates an era of increased ship traffic activities. This is an era where new generation ships are built, from the triple-E mega containers



By 1873, when Charles Morgan of the Morgan Lines owned the Houston Direct Navigation Company, it comprised of six steamers, forty barges, and five tug boats. In addition, Morgan owned the Buffalo Bayou Ship Channel Company and other channel acquisitions.

to the LNG / dual fuel burning ships, and, in the future, alternative energy ships that will use solar and wind power.

Will the Port of Houston be able to cope with this rapid growth? You bet! After all, this is Texas!!!

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¹ Julia Kathryn Garrett, "Dr. John Sibley and the Louisiana-Texas Frontier, 1803–1914," *Southwestern Historical Quarterly* (January 1942-April 1946), 45–49; Frederick Webb Hodge, ed., *Handbook of American Indians North of Mexico* (2 vols., Washington: GPO, 1907, 1910; rpt., New York: Pageant, 1959).

² Eugene C. Barker, ed., *The Austin Papers* (3 vols., Washington: GPO, 1924–28); Lester G. Bugbee, "The Old Three Hundred: A List of Settlers in Austin's First Colony," *Quarterly of the Texas State Historical Association* 1 (October 1897); Maria G. Burns, *Port Management and Operations* (Boca Raton, FL: CRC Taylor & Francis Publishers, 2014); T. R. Fehrenbach, *Lone Star: A History of Texas and the Texans* (New York: Macmillan, 1968); Christopher Long, "Old Three Hundred," Texas State Historical Association, Handbook of Texas Online, www.tshaonline.org/handbook/online/articles/umo01; *World Port Source*, Port of Houston, 2013, www.worldportsource.com/ports/review/USA_TX_Port_of_Houston_60.php.

³ Randolph B. Campbell, *Gone to Texas: A History of the Lone Star State* (New York: Oxford University Press, 2003); Frances Dressman, "Visions for Houston: Booster Literature, 1886-1926," *The Houston Review of History and Culture of the Gulf Coast* 9, no. 3 (1987): 137-154.

⁴ "Connecticut farm boy was father of Houston ship channel," Port of Houston Authority, April 1989.

⁵ Maria Burns, *Port Management and Operations* (Boca Raton, FL: CRC Taylor & Francis Publishers, 2014); *World Port Source*, Port of Houston, 2013, www.worldportsource.com/ports/review/USA_TX_Port_of_Houston_60.php; "Connecticut farm boy was father of Houston ship channel," Port of Houston Authority, April 1989; The Museum of Houston, 2013.

⁶ Houston Ship Channel 50th Anniversary Collection, 1926-1964.