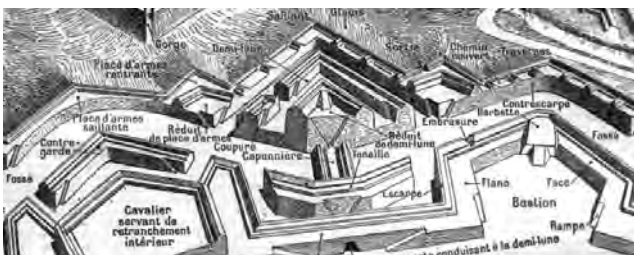


## A SHORT HISTORY OF ARTILLERY FORTIFICATIONS

The Chinese perfected the gunpowder formula—saltpeter, sulfur and charcoal— as early as the 9th century forever changing warfare. The technology arrived in Europe around 1327. Developments in metallurgy throughout the 1400s allowed for larger weapons.

Star shaped stone fortifications known as *trace italienne*- Italian Style-, developed in Italy around the end of the 15th century, became the only effective defense against artillery. European towns were transformed into fortresses.

With vast territories to protect *trace italienne* proved to be labor efficient. Sebastien le Prestre de Vauban estimated a ratio of ten attackers to every defender.



Artillery fortresses were built along the coastal United States by the colonists to protect against possible European attacks by sea. The American Revolution and the War of 1812 cemented the need for coastal defenses.

Dennis Hart Mahan taught Americanized theories of French siege fortification techniques perfected by Vauban for nearly 40 years at West Point. D.H. Mahan mentored James S. Morton, a West Point Engineering student.

Artillery developments during the Civil War— heavy guns and rifling— rendered many fortresses obsolete.

## FORT NEGLEY FACTS

Fort Negley consists of 62,500 cubic feet of stone, 18,000 cubic feet of earth and covers 4 acres on the top of St. Cloud Hill.

Fort Negley contained 11 guns operated by 75 artillerymen.

The stockade, constructed of 12' cedar posts, measured 96' X 96'.

Capt. James S. Morton modeled Fort Negley after Vauban's 17th Century designs.

Fort Negley's stone foundation was covered with dirt to prevent the stonework from shattering under artillery fire.

Two tall trees within the stockade served as observation platforms and signal stations.

1100 Fort Negley Blvd.  
Nashville, TN 37203  
615.862.8470

[www.nashville.gov/Parks-and-Recreation/  
Historic-Sites/Fort-Negley.aspx](http://www.nashville.gov/Parks-and-Recreation/Historic-Sites/Fort-Negley.aspx)

### Free and Open to the Public

#### Winter Hours (September - May)

Tuesday-Friday: Noon - 4:00 p.m.

Saturday: 9 a.m. - 4:00 p.m.

And by Appointment

#### Summer Hours (June - August)

Tuesday-Thursday: Noon - 4:00 p.m.

Friday and Saturday: 9 a.m. - 4:00 p.m.

And by Appointment

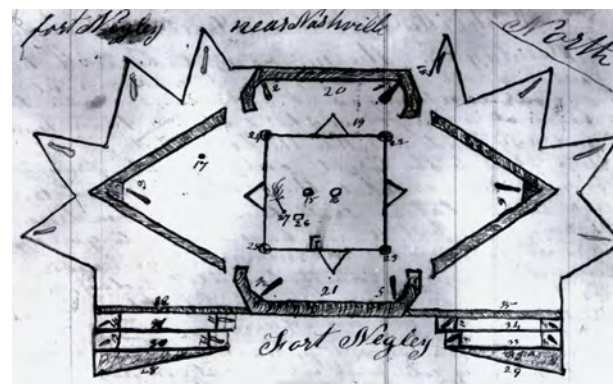
**Fort Negley Park is open daily dawn to dusk for  
self-guided walking tours**



TITLE VII The Metro Board of Parks and Recreation does not discriminate on the basis of age, race, sex, color, national origin, or disability in admission, access to, or operations of its programs, services, or activities. For TTY (relay service), call 1-800-849-0299. For questions, concerns, or requests regarding the American Disabilities Act call 615-862-8400.



## THE ART OF FORTIFICATION



Sketch of Fort Negley  
John Hill Ferguson's Civil War Diary  
Tennessee State Library and Archives



