

Tunnel Engineering

Tunnel A pipeline differs significantly from a tunnel, though some recent tunnels have used immersed tube construction techniques rather than traditional tunnel boring methods. It is dug through surrounding soil, earth or rock, or laid under water, and is usually completely enclosed A tunnel is an underground or undersea passageway. It is dug through surrounding soil, earth or rock, or laid under water, and is usually completely enclosed except for the two portals common at each end, though there may be access and ventilation openings at various points along the length. A tunnel is an underground or undersea passageway

The main barriers to constructing such a tunnel are cost (first estimated at \$88–175 billion, now updated to \$1–20 trillion) as well as limits of current materials science. Existing major tunnels, such as the Channel Tunnel, Seikan Tunnel and the Gotthard Base Tunnel, despite using less expensive technology than any yet proposed for the transatlantic tunnel, may...

Sunset Tunnel Sunset Tunnel, originally known as the Duboce Tunnel, is a 4,232 ft (1,290 m)-long light rail/streetcar tunnel in San Francisco, California. The tunnel runs under the steep hill adjacent to Buena Vista Park and is used exclusively by the N Judah Muni Metro line. The tunnel runs The Sunset Tunnel, originally known as the Duboce Tunnel, is a 4,232 ft (1,290 m)-long light rail/streetcar tunnel in San Francisco, California

The tunnel is 2,030 m (1.26 miles) long, running downhill from the western end of the 262 m (860 ft) long Cavendish cutting at Edge Hill in the east of the city, to Park Lane Goods Station near Wapping Dock in the west. The Edge Hill... A tunnel may be for foot or vehicular road traffic, for rail traffic, or for a canal. The central portions of a rapid transit network are usually in the tunnel. Some tunnels are used as sewers or aqueducts to supply water for consumption or for hydroelectric stations. Utility tunnels are used for routing steam, chilled water, electrical...

Thames Tunnel 1 m) high The Thames Tunnel is a tunnel beneath the River Thames in London, connecting Rotherhithe and Wapping. It is the first tunnel known to have been constructed successfully underneath a navigable river. The Thames Tunnel is a tunnel beneath the River Thames in London, connecting Rotherhithe and Wapping. It measures 35 ft (11 m) wide by 20 ft (6. It measures 35 ft (11 m) wide by 20 ft (6. It was built between 1825 and 1843 by Marc Brunel, and his son, Isambard, using the tunnelling shield newly invented by the elder Brunel and Thomas Cochrane. 1 m) high and is 1,300 ft (400 m) long, running at a depth of 75 ft (23 m) below the river surface measured at high tide

The tunnel was originally designed for horse-drawn carriages, but was mainly used by pedestrians and became a tourist attraction. In 1869 it was converted into a railway tunnel for use by the East London line which, since 2010, is part of the London Overground railway network under... The eastern entrance is located at Duboce and Noe streets on the south side of Duboce Park in the Duboce Triangle neighborhood, and the western portal is located in Richard Gamble Memorial Park near the intersection of Carl and Cole streets in the Cole Valley neighborhood. The tunnel rises from the northern portal at Göschenen (1,106 m or 3,629 ft) and the highest point (1,151 m or 3,776 ft) is reached after approximately eight kilometres (5 mi). After two more kilometers, the border between the cantons of Uri and Ticino is passed; after another five kilometres (3 mi...

St. Clair Tunnel Clair Tunnel The St. Clair River between Sarnia, Ontario and Port Huron, Michigan. The original, opened in 1891 and used until it was replaced by a new larger tunnel in 1994, was the first full-size subaqueous tunnel built in North America. Clair Tunnel is the name for two separate rail tunnels which were built under the St.) It is a National Historic Landmark of the United States, and has been designated a civil engineering landmark by both US and Canadian engineering bodies. (By full-size it is meant that it allowed a railroad to run through it. The first underwater rail tunnel in North America was opened by the St. engineering landmark by both US and Canadian engineering bodies

Transatlantic tunnel Gravity A transatlantic tunnel is a theoretical tunnel that would span the Atlantic Ocean between North America and Europe possibly for such purposes as mass transit. Some proposals envision technologically advanced trains reaching speeds of 500 to 8,000 kilometres per hour (310 to 4,970 mph). Most conceptions of the tunnel envision it between the United States and the United Kingdom – or more specifically between New York City and London. Discovery Channel’s show Extreme Engineering aired a program, titled “Transatlantic Tunnel”, which discussed the proposed tunnel concept in detail

Tunnel of Eupalinos The tunnel is the second known tunnel in history which was excavated from both ends (Ancient Greek: ἀμφίστομον, romanized: amphistomon, "having two openings"), and the first with a geometry-based approach in doing so. The tunnel is inscribed on the UNESCO World Heritage List along with the nearby Pythagoreion and Heraion of Samos, and it was designated as an International Historic Civil Engineering Landmark in 2017. Today it is a popular tourist attraction. responsible for three of the greatest building and engineering feats in the Greek world: the first is a tunnel nearly a mile long, eight feet wide and eight The Tunnel of Eupalinos or Eupalinian aqueduct (Greek: Ευπαλίνιον ὄρυγμα, romanized: Efpalinion orygma) is a tunnel of 1,036 m (3,399 ft) length running through Mount Kastro in Samos, Greece, built in the 6th century BC to serve as an aqueduct

Detroit-Windsor tunnel Detroit-Windsor tunnel (French: tunnel de Détroit-Windsor), also known as the Detroit-Canada tunnel, is an international highway tunnel connecting the The Detroit-Windsor tunnel (French:

tunnel de Détroit-Windsor), also known as the Detroit-Canada tunnel, is an international highway tunnel connecting the cities of Detroit, Michigan, United States and Windsor, Ontario, Canada. It is the second-busiest crossing between the United States and Canada, the first being the Ambassador Bridge, which also connects the two cities, which are situated on the Detroit River 5a8a3df39b

Wapping Tunnel It was the first transport tunnel in the world to be bored under a city. The 1-in-48 gradient of the tunnel was much too steep for the power of Wapping or Edge Hill Tunnel in Liverpool, England, is a tunnel route from the Edge Hill junction in the east of the city to the Liverpool south end docks formerly used by trains on the Liverpool-Manchester line railway. The tunnel was designed by George Stephenson with construction between 1826 and 1829 to enable goods services to operate between Liverpool docks and all locations up to Manchester, as part of the Liverpool and Manchester Railway. The tunnel alignment is roughly east to west. from the east required considerable engineering works in addition to the tunnel 5a8a3df39b

Gotthard Tunnel It was built as single bore tunnel accommodating a standard gauge double-track railway throughout. 3 mi) railway tunnel that forms the summit of The Gotthard Tunnel (German: Gotthardtunnel, Italian: Galleria del San Gottardo) is a 15-kilometre-long (9. The Gotthard Tunnel (German: Gotthardtunnel, Italian: Galleria del San Gottardo) is a 15-kilometre-long (9. 3 mi) railway tunnel that forms the summit of the Gotthard Railway in Switzerland. When opened in 1882, the Gotthard Tunnel was the longest tunnel in the world. It connects Göschenen with Airolo and was the first tunnel through the Saint-Gotthard Massif in order to bypass the St Gotthard Pass 5a8a3df39b

Underwater tunnel Engineering challenges and the unsolved political - An underwater tunnel is a tunnel which is partly or wholly constructed under the sea or a river. They are often used where building a bridge or operating a ferry link is unviable, or to provide competition or relief for existing bridges or ferry links. While short tunnels are often road tunnels which may admit motorized traffic, unmotorized traffic or both, concerns with ventilation lead to the longest tunnels (such as the Channel Tunnel or the Seikan Tunnel) being electrified rail tunnels. start November 2018) Taiwan Strait Tunnel if built would become the longest rail tunnel in the world 5a8a3df39b

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