Tunnels Threaten

EGER 1975

Hungarian Town

By Dusko Doder
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EGER, Hungary — This picturesque town seems a most unlikely place to have to struggle for its existence.

Founded by Hungary's first king, Stephen, in the early 11th century, Eger lies amid rolling hills on the northern edge of Puszta, or the lowland that extends from Budapest east toward Transylvania.

The town is surrounded by vineyards on all sides and its baroque buildings and palaces, its medieval fortress and church spires and its winding streets evoke an impression of tranquility that belongs to an antique engraving.

Yet, the town is in deep trouble. According to town officials, nearly one third of Eger's 51,000 people live, literally, on dangerous ground —a complex of huge, man-made tunnels whose length totals 61.2 miles.

A part of this intertwined tunnel complex was built in the 16th century, during the Turkish invasion. The rest dates back to the 18th and 19th centuries. The entire complex is under the historic part of Eger, an area comprising roughly 13,000 square yards.

"Until 1969," said Mikhaly Fekete, a construction engineer who heads the town's task force on tunnels, "we didn't know anything about these tunnels."

"That year we began the construction of a tall building and as we started digging we found out that the town lies on a very dangerous system of underground corridors."

Because of geological movements, 70 houses have virtually disintegrated in the past few years. Some buildings are rumored to have collapsed while their residents were inside and people were hurt, but this is officially denied.

Each month, authorities are quietly relocating families to new housing blocs on the outskirts. And the wooden scaffolding on many stately mansions that are now uninhabited testifies to the fact that strict precautions are in effect.

But the removal of an estimated 15,000 people who now live in what Fekete described as "dangerous" areas is a complicated and expensive project that may last for several years.

Moreover, the desire to preserve this lovely historic city would require investments that Eger could hardly marshal.

Laszlo Sebesteny, who is deputy mayor, said that the government in Budapest plans to contribute substantial funds to preserve Eger and a major drive was

launched last year to reinforce the tunnel that runs through the downtown area.

About 900 feet of new concrete tunnels have been built inside the dangerous downtown corridor. But the cost, according to Fekete, is roughly $1600 per foot. This is regarded as prohibitively expensive since this type of reinforcement, if applied to the entire complex of tunnels, would cost well over $400 million.

Instead, experts here said, Eger authorities intend to fill the tunnel complex with a special mixture that includes earth, industrial waste and something called "perlit cement." Subsequently, cement would be injected under pressure to help fortify the mix.

Hungarian scientists are said to be developing this type of technology at Pecs, an industrial city in southwest Hungary, that has similar problems but at a smaller scale compared to Eger's.

It is unclear, however, just how far along this new technique is in development or how much it would cost to apply it to solve Eger's problem.

The first Eger tunnels were built before the Turkish invasion. According to Historical accounts, the commander of the fortress, Stephen Dobo, ordered the building of an underground corridor in 1548 in anticipation of a Turkish siege.

When the 100,000-man Turkish army attacked Eger in 1552, the Hungarians used the corridor to resupply the besieged town and also to harrass Turkish forces with Hungarian cavalry. Stables capable of containing 240 horses were built underground.

Since the Turks were unable to take Eger, they withdrew their force. The Hungarians, in turn, brought in Italian builders to strengthen the fortress and build more tunnels. Despite these reinforcements, the Turks managed to take Eger in 1596 and it remained under Turkish rule for 91 years.

According to Fekete, whose task force has been working on a map of underground tunnels since 1969, the total length of the tunnels built in the 16th century is about 7.5 miles. The remaining 53 miles of tunnels were built by Eger residents in the 18th and 19th centuries, when the town became an important military and commercial outpost of the Hapsburg empire.

With the passage of time, however, the existence of most of these tunnels was forgotten.

After World War II, Communist authorities sought to

industrialize the region. New industries were built in Eger, including a machine tool factory, a furniture factory and an electronics firm. The old tobacco factory was modernized and enlarged, and the town itself has nearly doubled in size since 1945.

The nation's economic development has been vigorous, especially since 1968 when the government introduced cautious economic reforms. In Eger, however, the discovery of the tunnels has created a new set of problems.

The basic predicament is that the majority of tunnels are said to be in very poor condition and an 18-mile-long stretch of intertwined passages has been weakened by erosion and earth movements to a point where housing above that tunnel is regarded as "dangerous," Fekete said.

According to expert estimates, people living in that area will have to be moved within the next five years.

But an even more basic problem was the preservation of the historic part of Eger. Even if all the residents were moved away from the dangerous zones, Fekete said, the collapse of those tunnels and the ground above them is only a matter of time.

Additional problems involve construction of water and sewerage systems, as well as the prohibitive cost of new construction. Houses here must be built on dozens, or sometimes hundreds, of massive concrete stilts that extend to 35 feet below ground level.

Eger's residents and authorities have decided that the town should be preserved and that the only way to do that is to fill the tunnels. But much depends on the development of technology and then the accumulation of the financial resources to apply it.