References

A test installation of an infra culvert with great potential



Uponor involvement

- 50 meter of Weholite dimension 2200 SN8
- Uponor Infra Project Services
- Detailed construction drawings, technical support, field services

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Flexible and reliable
The municipality of Sollentuna has installed an infra culvert as a test pilot in an existing urban environment, Väsjö area. After starting work on a traditional facility, it proved to be both expensive and time consuming. In a conversation with Sollentuna's project manager consultant Jonas Tjernberg, he explains why the solution with Uponor Infra's infra culvert will instead be a sustainable solution in the long term.

Project Facts:

Location	Completion
Sollentuna, Sweden	2020
Building Type	Product systems
Municipal	Tailor made constructions
Address	Project Type
Väsjö, Sollentuna	New building

Partners

- We realized that a culvert installation would be cheaper and faster compared to a traditional construction. When we investigated a slightly longer stretch from Väsjön to Edsviken in Sollentuna, we saw at once that we could plan, build and save in a completely different way by using a culvert, says Jonas Tjernberg.

Sensum, Sverige

Flexible - Reliable - Fast - Cost efficient - Sustainable

The work with a traditional installation and progress had already been going on in Sollentuna for a long time before a solution with an infra culvert came up. When Uponor Infra entered the project, the installation work around sheet piling and shaft boxes was expensive, slow and caused a lot of disturbance to the nearby residents. There is a lot of noise when placing a sheet pile in the traditional way. Most often, you also need to dig up the ground several times due to the positions of the conductor beds.

Flexible and reliable

- Concrete pipe lines are expensive and heavy, but the culvert is very light and flexible. We do not need to have a crew in the shaft when we place it, which makes everything much safer. That was how the idea for an infra culvert solution was raised, explains Jonas Tjernberg, responsible consultant for Sollentuna Energi & Miljö (SEOM).

The pipe that will be used in Sollentuna is a Weholite pipe in dimension 2200 SN8. The material is flexible and can be easily machined without the wires being affected internally. In comparison with a normal traditional concrete pontoon, the culvert itself also functions as a building structure. Servicing lines or carrying out repairs is not only faster and easier, but also increases operational reliability.

Faster and cheaper

According to the conventional way of working, 0.6 to 1 meter per day was calculated for propulsion. The calculation for a new route with Uponor Infra's culvert solution, on the other hand, came to a rate of 6 to 12 meters per day.

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As another example, he mentions the construction at Backvägen. The plan there is to place a culvert at the property boundary without affecting the buildability of the property. With a traditional location, this would not have been possible and especially in an industrial area, it could become a costly factor when accessibility and traffic are affected for a long time.

- A distance that would normally have taken a year, we could solve in six to eight weeks instead. It is incredible. You can also keep the traffic open and affect it only exactly where you excavate.

An infra culvert is a sustainable solution with much less environmental impact than traditional concrete installations. As a benefit for society and the environment, you can put district heating, electricity and fiber in the same culvert. There are many opportunities to add wires or to easily expand existing networks.

A sustainable solution for the future

An infra culvert is a sustainable solution with much less environmental impact than traditional concrete installations. As an added value for society and the environment, you can put district heating, electricity and fiber in one and the same culvert. There are many opportunities to add wires or to easily expand existing networks.

- You also get the benefit of reduced carbon dioxide emissions on the purchase. When we think of the culvert, it also means that you do not get any leakage into the environment. It is also something that can be especially important when locating close to industry. With a culvert, you have a completely different control over it. The culvert solution is good for the environment in every way and has a huge potential for the future, says Jonas Tjernberg.

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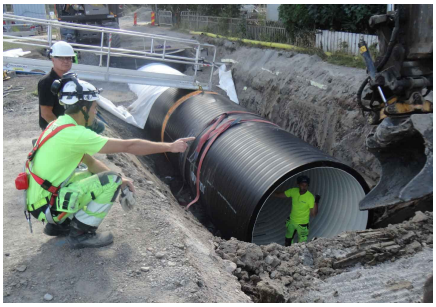













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