References

Northstar Railway



Uponor involvement

Project highlights

- System: Uponor Snowmelt System
- Installing contractor: Klamm Mechanical, Burnsville, MN
- Engineer: Steen Engineering, Minneapolis, MN

Products used

- 48,000 feet of ¾" Wirsbo hePEX tubing
- 500 feet of 1½" Wirsbo hePEX tubing
- 2500 feet of 2" Wirsbo hePEX tubing
- 300 feet of 4" Wirsbo hePEX tubing

Commuter railway platform features Uponor snowmelt

See how Northstar's commuter rail platform was made safer with Uponor's snowmelt system. Combatting winter ice required...
The newly completed Northstar commuter rail provides a critical link for commuters along one of the most congested and fastest growing corridors in Minnesota. Each station offers distinctive amenities, including convenient connections to other transit options and area activities. Northstar trains provide service from Big Lake, located about 40 miles northwest of the Twin Cities, to downtown Minneapolis during peak commuting hours.

The main station is located in Ramsey, and it consists of two main passenger platforms and a pathway to a large parking garage. Each platform is 425 feet long and 26 feet wide, and crosslinked polyethylene (PEX-a) tubes are embedded in the platforms with a snowmelt system from Uponor to keep riders safe from slipping in the icy and snowy Minnesota winter weather.

Project Facts:

Location	Completion
US - Midwest, Minnesota	2012

Application categories

Hydronic Heating & Cooling

Project Type

New building

See how Northstar's commuter rail platform was made safer with Uponor's snowmelt system

The Uponor snow and ice melting system circulates a warm water and glycol solution through PEX-a tubing buried in concrete. The system is designed for 50 percent glycol solution which is heated by a high-efficiency boiler, and the water/glycol solution then heats the station surface until it is warm enough to melt snow and ice.

‘‘We laid down a total of 48,000 feet of tubing for the Big Lake station,’’ said Greg Koba with Klamm Mechanical, the snowmelt installation contractor. ‘‘We took advantage of Uponor’s Wirsbo hePEX™ ¾" tubing for the two platforms. There are six manifold boxes placed every 85 feet and embedded in the sidewalk butting up to the platform. These boxes house 20 TruFLOW Jr. supply manifolds that feed the ¾" tubing which is laid 6" on center.’’

In addition to the ¾" tubing, there are also eight 2" PEX main lines for each platform that run from two manholes in the landscape area, then enter the slabs and stub into the manifold boxes. The two manholes connect through a 16" jacket housed underneath the track that also holds the two 4" main lines that supply the platform.

Interestingly, the platform was initially designed for HDPE piping, but Klamm Mechanical quickly realized that HDPE would not be able to provide the BTUs required for the snowmelt system. ‘‘HDPE pipe is not designed to handle the type of system that this project required,’’ Koba said. ‘‘We were able to change specifications with the engineering firm to PEX tubing.’’

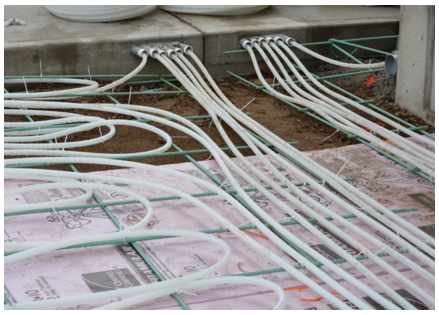
Klamm Mechanical has many years of experience with PEX installations, and their expertise was important during this project. ‘‘One of our biggest concerns was to ensure that the supply and return piping to the manifolds did not compromise the structural needs of the system,’’ Koba said. ’’By using large-dimension tubing to feed all the manifolds, we were able to route the system efficiently and correctly.’’

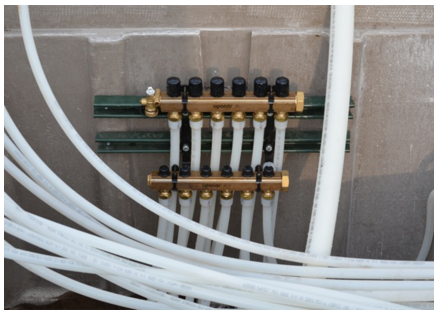
Dean Corrigan of FourMation Sales, an Uponor manufacturer’s representative located in Minneapolis, consulted with the engineering company when they redesigned the system from HDPE pipe to PEX, and also spent time with Klamm Mechanical during the snowmelt installation. ‘‘We were able to turn around a design in 48 hours so not to slow down the installation timelines,’’ Corrigan said. During installation, FourMation Sales provided more than just technical expertise. ‘‘We have a large inventory of tools that we let our customers use when needed, and this came in handy during crunch time.’’

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