



CITY BUILDING FOR FUTURE: COUNTING ON REDUCED MAINTENANCE WORK & COSTS

PIPESTONE REPLACES ASPHALT STREET WITH CONCRETE

Reducing street maintenance costs and eliminating potholes rank high on the City of Pipestone's public policy agenda. So when the city needs to rebuild a street and the infrastructure below, it's been turning to concrete.

PROJECT DESCRIPTION

Pipestone, a city of about 4,300 located in southwestern Minnesota, needed to replace its deficient and undersized underground water, sanitary sewer and storm sewer utilities in the Hill Elementary School neighborhood in 2017.

The city required bids for both asphalt and concrete pavement and opted to go with concrete.

"We are looking at the extended life of a concrete street," said City Administrator Jeff Jones.

And in some cases, that means replacing an asphalt street with a concrete one. That's what happened on this project, which included work on Seventh Avenue SW, Ninth Street SW and 11th Street SW.

"The city wanted to see what the cost difference was, knowing the life of concrete is longer," said City Engineer Travis Winter of Bolton & Menk, Fairmont.

Winter said that while concrete generally costs about 3/4 more on the front end, it requires little or no maintenance. So at the end of 50 years – the life expectancy of a concrete street -- the cost of asphalt and concrete are about even.

For this project, paving with concrete cost the city about \$350,000, or roughly 60 percent more than the asphalt bid. That's about \$30,000 more per block paved. But when the city considered the costs of maintaining the asphalt street for 50 years, the city is projecting an overall cost savings of \$10,000 per block.

Had the city selected asphalt, two major mill and overlay project would be required, adding another \$40,000 per block to the initial cost.

The project cost \$3.07 million, about 20 percent of which will be assessed to property owners.

PROJECT DATES

June 2017-November 2017

PROJECT DETAILS

- Concrete depth: 6 inches with 6 inches of Class 5 Aggregate sub base (100% crushed rock) and 6 inches of select granular borrow (clean sand) • Total project length: .85 miles
- Total concrete placed: 3,632.5 cubic yards for pavement, curb, gutter; 684 CY for driveways and sidewalks

TEAM

- Owner: City of Pipestone • Project Lead: Travis Winter, Pipestone City Engineer, Bolton & Menk
- Project Designers: Bolton & Menk, Fairmont • Prime Contractor: Quam Construction Company, Willmar
- Concrete contractors: Hulstein Excavating, Edgerton, and Hisken Construction, Marshall
- Ready Mix Concrete Producer: Buffalo Ridge Concrete, Pipestone MN