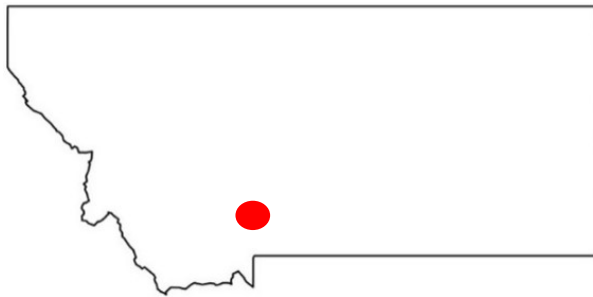


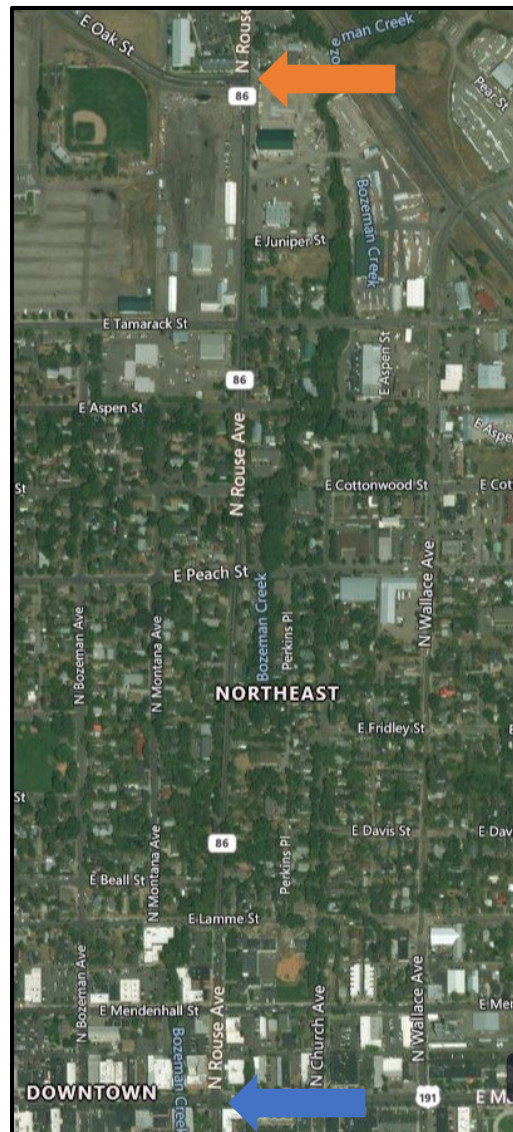
**Experimental Feature Evaluation
 July 2023**

Experimental Feature:	Nomaflex Joint Filler
Location:	Butte District, Galletin County, City of Bozeman, MT 86 (Rouse Avenue)
MDT Project Name:	Rouse Ave – Main to Oak
MDT Project Number:	STPP 86-1(27)0[4805]
Experimental Project Number:	MT-21-06
Principle Investigator:	Chad DeAustin, Experimental Project Manager, (ExPM)
Construction Date:	Summers of 2020 & 2021
Inspection Dates:	April 2022, June 2023

Project Map



- ← Intersection of N Rouse Ave and E Oak St
- ← Intersection of N Rouse Ave and Main St



Feature Description & Outline

Concrete joint filler is a standard practice in construction when placing new concrete against existing concrete. Nomaco, a leader in the industry of the custom engineered foam products, has released an engineered performance foam concrete joint filler, Nomaflex. Per Nomaco, “Nomaflex is a performance engineered foam that sets a new standard for concrete expansion joint fillers. It is a semi-rigid, closed-cell polypropylene foam that simply performs better and installs faster. Plus, the innovative Nomaflex Cutter tool enables concrete installers to easily trim Nomaflex on the job site or pre-score a removable 1/2” vid for use with sealants. This saves labor and money by eliminating the need of an addition void cap system.”

This product has been tested in residential, commercial, civil, municipal, and industrial applications and Nomaco claims that it does not absorb water causing swelling or disintegration. See link below for specification information on the product.

For more information visit the [Nomaco website](#).

For this feature, Nomaco’s Nomaflex replaced the standard concrete joint filler in an urban setting of sidewalk in the City of Bozeman, including some sidewalk in the downtown area that sees a higher volume of activity. New concrete adjacent to the project that standard fiber joint filler was constructed with will be used as a control.

Evaluation Procedures & Schedule

The measures of effectiveness prevalent with this project will focus on:

- Construction practices (constructability, construction time, cost effectiveness, etc.),
- Visual inspection of effectiveness and durability of the Nomaflex.

In accordance with MDT’s Experimental Features Procedures, the Experimental Project Manager will monitor and report on performance for a minimum of five years annually. This includes delivery of a work plan, construction report, annual reports, and final project report.

2021: Installation/Construction Report
2022-2025: Annual Inspections/Evaluation Reports
2026: Final Evaluation/Final Report

A dedicated [webpage](#) provides all reporting for the experimental feature.

2023 Inspection – June

A section on expansion joint was noticed where the Nomaflex was not impacting both sections of concrete. It was reported to MDT Materials and Maintenance as an area to watch.



↑ Example of the Nomaflex used on the project. The photos for this visit are between Tamarack Street and Oak Street on the eastern sidewalk.



↑ Example of asphalt fiber joint filler that is considered a control from a section of existing sidewalk near but outside of the project limits that's typically used when constructing concrete expansion joints.



↑ Close-up view of the area of Nomaflex joint filler to be monitored due to the lack of contact with the concrete.



↑ An example section that was highlighted as a place where the Nomaflex worked well specifically because of the long length of the joint and the workability of the product.

Construction Documentation – Summer of 2020 and 2021

The Research Section did not have anyone on-site for the construction of this project and the installation of the Nomaflex. The construction documentation relies on the impression and comments of MDT's construction team and Knife River's concrete crew that were on the project. Per Craig Walker, MDT's Project Manager for the project, the material was easier to work with than standard asphalt fiber joint filler. It's a lighter material that doesn't break like the fiber material when attempting to use a longer piece for expansion joints on areas such as driveways. Craig stated he wasn't aware of any negative feedback from the concrete crew. After reaching out to Knife River, the comments from the crew only noted one negative aspect of the Nomaflex. They stated that because the material is light, it tended to float up and needed to be cut back down to grade. However, they solved it by simply adding a few extra stakes to hold the Nomaflex in place. Knife River also mentioned another positive was it was easier to finish against as the material doesn't fray or break when the edging runs against it like the fiber material. Overall, the material's positives and workability outweigh the few negatives mentioned by the contractor.

Note: MDT has made attempts to find prices of each to do a cost analysis of the two products, but suppliers haven't responded. When the information is received a cost comparison will be included.

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