



## Concrete inlay project for 1.42-miles of Valley Creek Road

### What was the problem?

County State Aid Highway (CSAH) 16, known as Valley Creek Road to suburban Woodbury (Minn.) residents, is heavily traveled and needed repair. Sections of the road had been milled and overlaid in the late 1990s, and by 2012 required a lot of work. CSAH 16 crosses CSAH 13 (Radio Drive) which is the busiest intersection in the county road network. CSAH 13 on both sides of CSAH 16 was recently repaved; however, the pavement repair inside the intersections was delayed until this year's project. For one neighborhood, Valley Creek Road is the only entrance.

### What was the solution?

We chose to place concrete for a 1.42-mile stretch of this 2.57-mile project from Bielenberg Drive to Interlachen Parkway because it crosses the intersection and was in the worst shape. Valley Creek Road from Interlachen Parkway to CSAH 19 (Woodbury Drive) was reconstructed and expanded in the mid-90s. We did a life-cycle cost analysis and compared it to traditional bituminous pavement rehabilitation methods such as remove and replace and full-depth reclamation. Concrete was selected for the western portion of the project because of the deteriorated pavement conditions and the amount of traffic that Valley Creek Road handles. Concrete requires less maintenance during its service life and therefore requires less impact to traffic. While there is significant traffic impacts during the initial paving process, the longer frequency between maintenance projects and impacts to traffic during those projects made concrete the favorable choice in this situation.

### Key facts about the project

- ▶ Used 8,300 cubic yards of structural concrete and 60,000 SY of concrete pavement.
- ▶ All but 278 SY of the pavement was 5" thick.
- ▶ A proprietary blend of ready-mix concrete cured within 12 hours.
- ▶ Started the overlay on August 1, 2012 and the project was completed in early November, 2012.
- ▶ Cost \$3.268 million.
- ▶ Expected to last 30 years.

### Final comments

We were aware that the repair would impact traffic for a little over a month and that we wouldn't be back with a project that includes significant traffic impacts for years. An open house was held to inform residents and businesses of the anticipated traffic impacts. There is also a website that updates as the contractor progresses in the field as well as a Twitter feed.

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Owner: Washington County  
County design engineer: Jake Gave, PE

Ready Mix Supplier: Aggregate Industries  
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