

## FMG Services/Cold In-Place Recycling



### Cold-In-Place Recycling

FMG has recycled more than 20 million square feet of roads throughout Northern California using this technology. We use a state-of-the-art single unit train called the Wirtgen 3800CR, a highly trained crew and Caltrans certified mobile laboratory and technicians to recycle the top 3-6 inches of existing road. Watch the video on our website to see the process in action.



[www.fmgcoinc.com](http://www.fmgcoinc.com)

### Milling & Grinding

FMG has provided excellent grinding services to our customers since 1999. We cover Northern and Central California with a large fleet of grinders of varied drum widths.

Whether your project is a major highway, road or pipe trench, we have the right grinder for you.

### Equipment Rental

FMG offers a range of rental equipment, including grinders, pavers and skidsteers.



Caltrans approved Nonstandard  
Special Provision (NSSP) for foamed asphalt

[www.fmgcoinc.com](http://www.fmgcoinc.com)

License #796046

#### Cold-In-Place Recycling

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Welcome to FMG, leaders in  
**COLD-IN-PLACE**  
RECYCLING





# Save Big with CIR

<b>+62%</b> Overall energy savings	<b>+52%</b> Less Greenhouse Gas Emissions	<b>90%</b> Reduction in Truck Traffic	<b>0</b> Zero waste approach
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## What is Cold-In-Place Recycling (CIR)?

CIR is a rehabilitation technique that reuses existing pavement without applying heat. It involves grinding the top 3-6 inches of existing asphalt surface. The reclaimed asphalt pavement is sized per design specifications and mixed with a recycling agent and/or binder in the machine's heavy duty chamber before it is put down on the same road. The new mix is spread uniformly across the road by the machine's spreading auger, which allows the paving screed to place and compact in a single sweep.



This work is done with our single unit train Wirtgen Cold Recycler 3800 CR. This machine allows us to recycle curvy roads, busy intersections and wide open roads without snarling traffic and creating dust.

## Why choose CIR?

CIR is a faster, safer and greener method to improve roadway surfaces. The single unit train does not leave a lowered section or hole that limits access for emergency vehicles. The CIR surface can be traveled on within minutes of completion. This means no disruption of services when working in front of hospitals, schools, firehouses or police stations.

## When is CIR the best option?

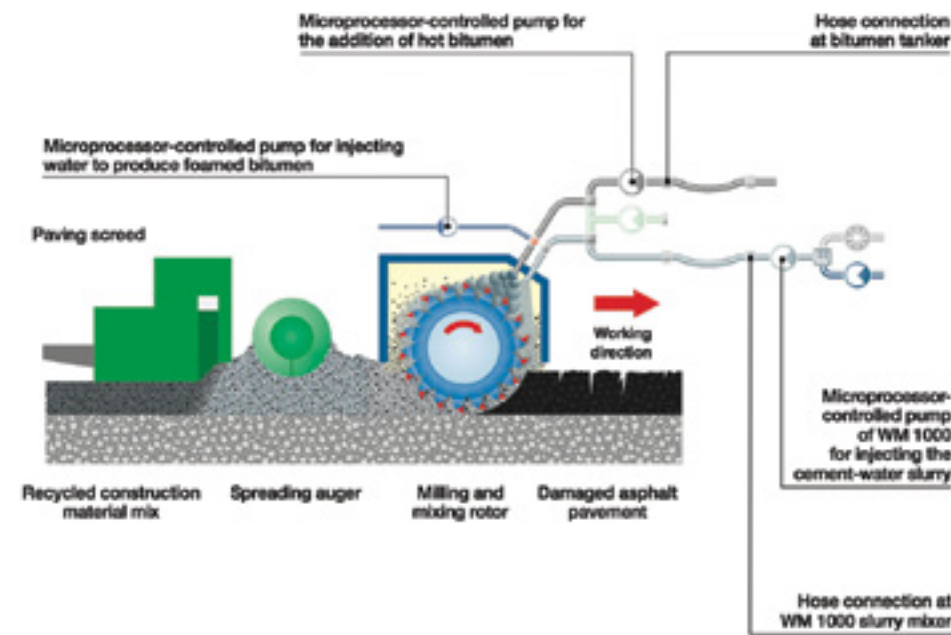
CIR is best when you're looking for a value engineering alternative that can save 20-40 percent of your road maintenance budget.

Key factors for CIR:

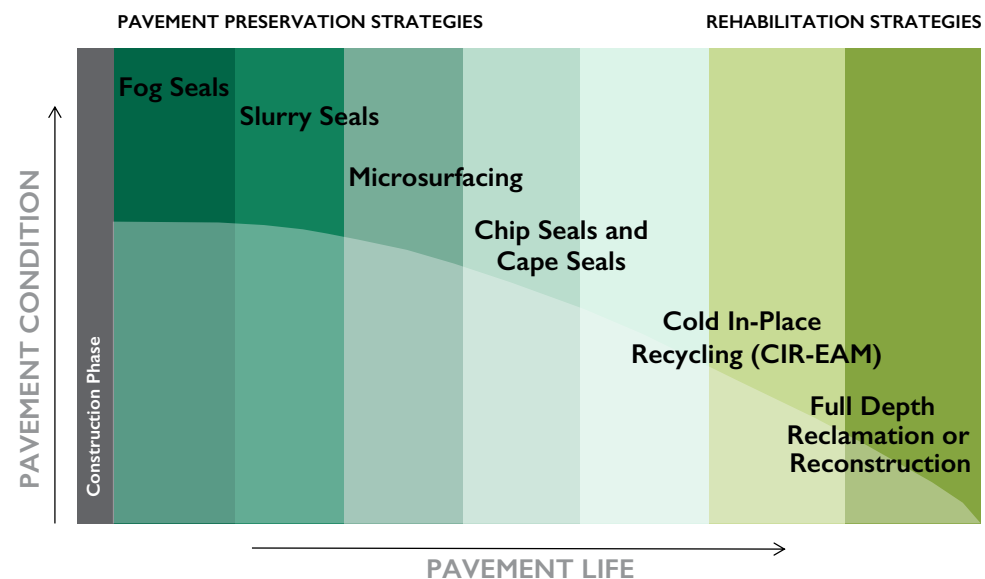
- Surface failure, including excessive surface cracks, thermal distress and oxidized asphalt
- Roadway has more than 30 percent base failure/digouts
- Short construction times are critical
- Traffic control demands single lane closure

# Cold-In-Place Recycling (CIR) Equipment

SINCE CIR STARTED 30 YEARS AGO, THE MACHINERY HAS EVOLVED TO BECOME TECHNOLOGICALLY AUTOMATED.



We use the Wirtgen Cold Recycler 3800CR for CIR jobs. This is a single unit train that pulverizes existing asphalt to a maximum depth of 6 inches, which is mixed with an asphalt binder and water in the machine's milling and mixing chamber to create a new mix. The mix is spread uniformly across the road.



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It is a beautiful thing when a Green solution is also the most cost effective solution.”

**Michael J. Murdter P.E.**

Director Roads and Airports Department, County of Santa Clara

“This is very meaningful for us primarily because we do not have enough funds to take care of our roads. CIR is very successful in terms of quality, ease of construction and minimal impact on our community.”

**Hans F. Larsen P.E.**

Director of Transportation, City of San Jose

“We are very committed to CIR and we want to close the loop on Recycling by your soon-to-be-deployed Cold Central Plant Recycling (CCPR), where we can utilize millings from our roads, which are currently going to dump sites and increasing our landfill, to be recycled and reused in our road projects.”

**George M. Bolton III**

Construction Manager, County of Alameda Public Works Agency

“We liked CIR on our projects. It is fast and the minimal dust during construction is huge for us and our residents.”

**Ashraf I. Shah**

Assistant Engineer, City of Foster City



Why?... “Because it’s the right thing to do!”