## Wanted: Contractors & rock drill operators!

**Contractors: Do you have a project requiring at least 100 deep holes be drilled into concrete (for example, dowel drilling or ~1" x 12")?**

**Drill operators: Would you agree to take part in the study and drill for about 4 hours (at your employer's work site)?**

**What happens during the study?**

**We ask workers and contractors to compare the usual way of rock-drilling with a new drill support tool we are designing. For the study, a participating worker will use the drill support and the usual (hand-held) method each for 2 hours (4 hours total). We will observe, photograph, video and make other measurements while the worker is drilling. Each worker will complete a short survey (written or by interview) about their experience during drilling.**

**The study is designed not to interfere with work.**

### HOW TO GET INVOLVED

Please call Maggie Robbins at (510)620-5864 or the UC Ergonomics Program at (510)665-3403. Or by email: **UCErgonomics@gmail.com**

This research is made possible by the Center for Construction Research and Training (CPWR) as part of a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH).

Study Director
David Rempel, MD, MPH

Engineer
Alan Barr

Field Coordinator
Maggie Robbins, MPH

**UCSF Ergonomics Program**
1301 South 46th St., Bldg. 163
Richmond, CA 94804
CA Phone (501) 665-3403

ergo.berkeley.edu

UCSF
University of California
San Francisco

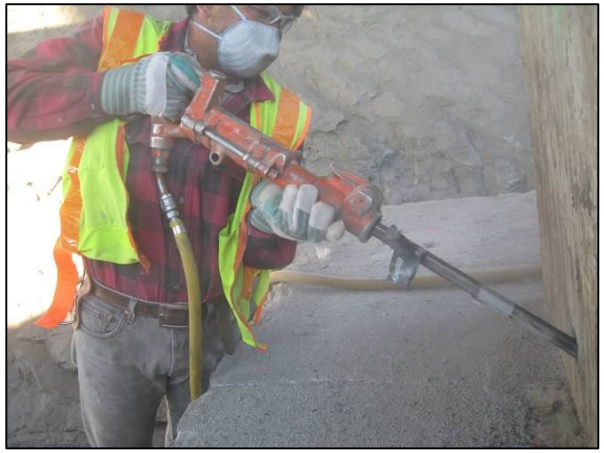
UCSF Ergonomics Program

# HIGHWAY, BRIDGE & STRUCTURAL DRILLING PROJECT

## Where Innovation Meets Application

## THE PROBLEM

**Concrete drilling exposes workers to high forces, strong vibration, and awkward body positions. These injure the hands, arms, shoulders and back.**



## THE SOLUTION

**A rock drill support system.**

Drill support system with dust-collection.

## What is the Highway, Bridge and Structural Drilling Project?

**The Project is researching a new tool intended to make rock drilling into concrete safer and easier. The goal is to lower the force and vibration drillers experience while rock drilling, while maintaining the speed and quality of the work. We are designing a dust-control system to work with the new tool to capture the concrete dust created by drilling.**

**The study will find out whether a rock drill support protects workers' and enhances productivity, and will gather recommendations to improve it.**

## Reasons to Participate

- **Help shape ergonomic innovations in the construction industry**
- **Get access to a new tool that improves productivity of your job**
- **Be recognized for advancing health and safety in construction**
- **Step into the future: Have a tool do the heavy work guided by a more productive worker**

## Who is doing the study?

**The University of California, San Francisco is doing the research. The study is funded by the National Institute of Occupational Safety and Health (NIOSH) through the Center for Construction Research and Training (CPWR).**

## Why are we doing the study?

**Of all industries, construction has the highest rate on musculoskeletal loads to the back, shoulders, arms, and hands.**

**The most physically demanding tasks are those requiring workers to exert high forces, use awkward body positions, or experience strong vibration or high repetition.**

**Rock drilling work – such as dowel drilling into concrete – requires workers to experience these conditions.**