

PARK RANGE CONSTRUCTION NEWS

ISSUE 05, November 2013 303.781.8936 ParkRangeConstruction.com 2755 South Raritan Street, Englewood, CO 80110

Repair Specialist since 1981.

Park Range Construction is a family owned general contractor established in 1981.

Park Range is highly respected throughout the engineering and building community as a structural repair specialist.

Park Range provides a highly competent team of estimators, project managers, on-site supervisors and qualified crews equipped to provide excellent service.

Our staff will provide all scheduling and communication between the owner, engineer and client.



ECP Resistance Piers Underpin Existing Residential Foundation



Park Range Construction was awarded a contract to underpin the existing foundation of a home in Lander, Wyoming. It was necessary to abandon the existing piers. Resistance piers are end-bearing piers that are hydraulically pushed into bedrock or verified load-bearing stratum. Park Range installed 44 Earth Contact Product Galvanized 3-1/2" Resistance Piers up to 42 LF depth and 50 Kips. Footings were chipped to allow the installation of underpinning brackets directly adjacent to the foundation. At pier locations, helical tie-downs were installed and attached to the existing 4' grade beam. The helical tie-downs provided additional resistance during installation and load-testing. Piers were filled with high strength grout and #6 threaded bar and were then load-tested. Using a hydraulic manifold the home was then re-leveled. In order to repair the walls, cracks were epoxy injected.

Engineer of Record: Western Engineering & Allen G. Thurman, Consultant

In This Issue

- P1 ECP Resistance Piers Underpin Existing Residential Foundation
- P2 New Restaurant Foundation Uses Helical Piers—Izakaya Den—Denver, CO
- P3 Structural Repair & Renovation Specialist Serving Multi-Family Housing
- P4 What are Resistance Piers?

Editor's Comments

In our Fall/Winter 2012 issue we overlooked the Engineers of Record in two of our articles. Chris Carter of Engineering Friend provided the engineering for "Larkspur Residence Undergoes Wall Repairs" and Wendy Amann of Hewitt-Zollars provided the engineering for "Micropile Underpinning in a Superior Townhome Community". We apologize for the oversight.

New Restaurant Foundation uses Helical Piers Izakaya Den — Denver, Colorado



Park Range Construction was contracted to install over 119 Magnum 3" Reinforced Tubular Helical Piers for the new restaurant foundation. The site required the operation of drilling rigs which could operate in tight quarters between two existing buildings.

Due to the nature of the hard soils and a 60 LF depth requirement, holes were pre-drilled with a TEI skid mounted rock drill. In order to complete the job on schedule, we used multiple drilling rigs simultaneously. Although the drilling conditions were challenging, the job was successfully completed in a timely manner.

Client: Jordy Construction | Owner: Izakaya Den | Engineer of Record: Performance Engineering |
Engineers—Structural: Magnum Geo-Solutions | Architect: Roth Sheppard Architects |
Engineers—Geotechnical: CTL Thompson |

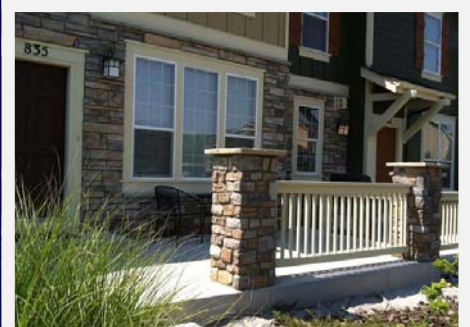
**Park Range Construction, Inc. is now officially WOSB
a certified Women-Owned Small Business.**

Structural Repair & Renovation Specialist Serving Multi-Family Housing

Park Range Construction has been a structural repair and renovation specialist since 1981. We have completed thousands of jobs involving foundation repair and structural repair over the last 30 years in Denver, Colorado Springs, Ft. Collins and along the Front Range of Colorado including Wyoming, Montana, Utah and New Mexico. We offer a variety of foundation systems such as helical piers, micropiles and resistance piers. We perform structural repair and install structural floors, such as the patented Ranger Floor System.

Our drainage services include a wide variety of drainage systems. Keeping water away from foundations is the key to preventing structural failure, leaking basement walls, foundation cracks and water intrusion. This includes the installation of interior perimeter drains connected to sump pits and sump pumps. Exterior drainage improvements include drainage installation, down spout and sump pump extensions as well as drainage swales, concrete pans and sidewalk chases. Ensuring that soils and concrete are sloped away from foundations is imperative to prevent the need for future basement foundation repairs. Our crews provide quality grading and landscaping improvements as well as concrete and asphalt removal and replacement.

Park Range installs drainage systems in multi-family and residential subdivisions for overall community drainage solutions and de-watering.



Call us today for an estimate!

303.781.8936

Visit

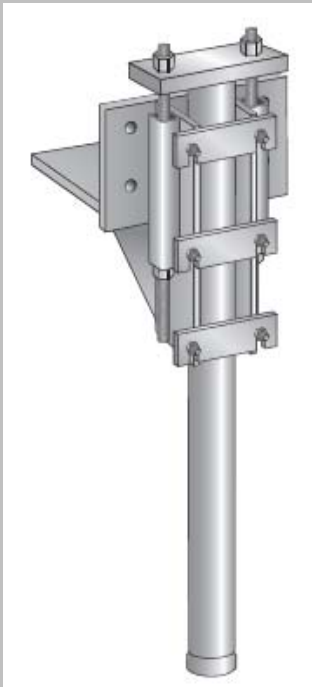
ParkRangeConstruction.com

to see our Project Portfolio,
Newsletters and read more about our
Structural Repair, Remodeling and
Renovation capabilities.

Lunch & Learns with Park Range Construction

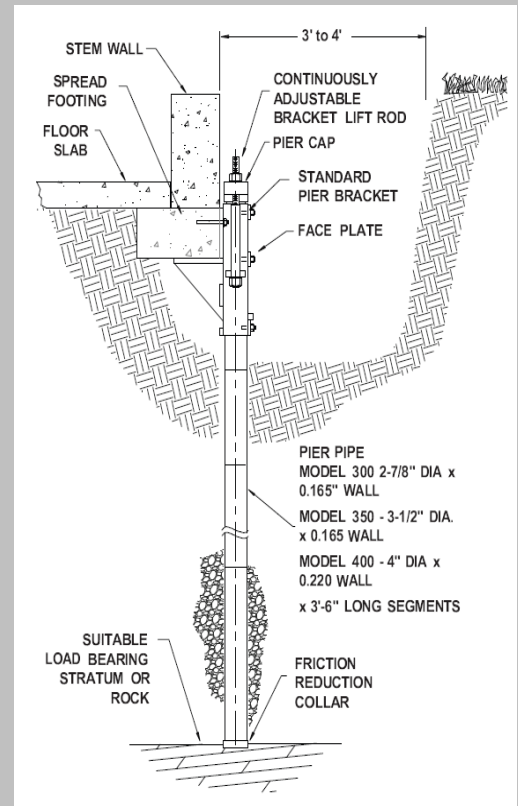
We are pleased to offer Lunch and Learn Presentations to your office so you can learn more about the products and services we offer. Please contact us at **303.781.8936** to schedule a one-hour seminar to be held at your office.

What are Resistance Piers?



Resistance piers, also known as push piles, are used to underpin and shore existing structures. Galvanized steel resistance piers are hydraulically installed to support or re-level existing foundations. They are pushed into bedrock or a verified load bearing stratum. The piers are then filled with grout and threaded bar. These end-bearing piers are installed vertically and adjacent to the foundation walls. The underpinning bracket is attached to the foundation for stabilization or re-leveling. The ability of a resistance pier is a function of the capacity of the pier pipe, the soil surrounding the pipe, the load bearing stratum, foundation bracket, foundation

strength and the effectiveness of the bracket to foundation connection.



Resistance piers, such as the ECP Model 350 Pier System, has an ultimate capacity of 86,000 pounds and a maximum proof test of 64,500 pounds. The 350 is a 3-1/2" diameter, high strength galvanized tubular pier pipe. It offers a 74 square inch bearing surface and can be installed with portable equipment from inside or outside the structure. It contains a friction reduction collar on the lead pier section and installs with little or no vibration due to the effectiveness of the collar on the first section of the pipe. Resistance piers are an ideal solution for underpinning existing structures.

