

HIGH-END RESIDENTIAL

Statement of Qualifications

DCI Engineers | January 2025

Structural Engineering Services

High-End Residential Experience



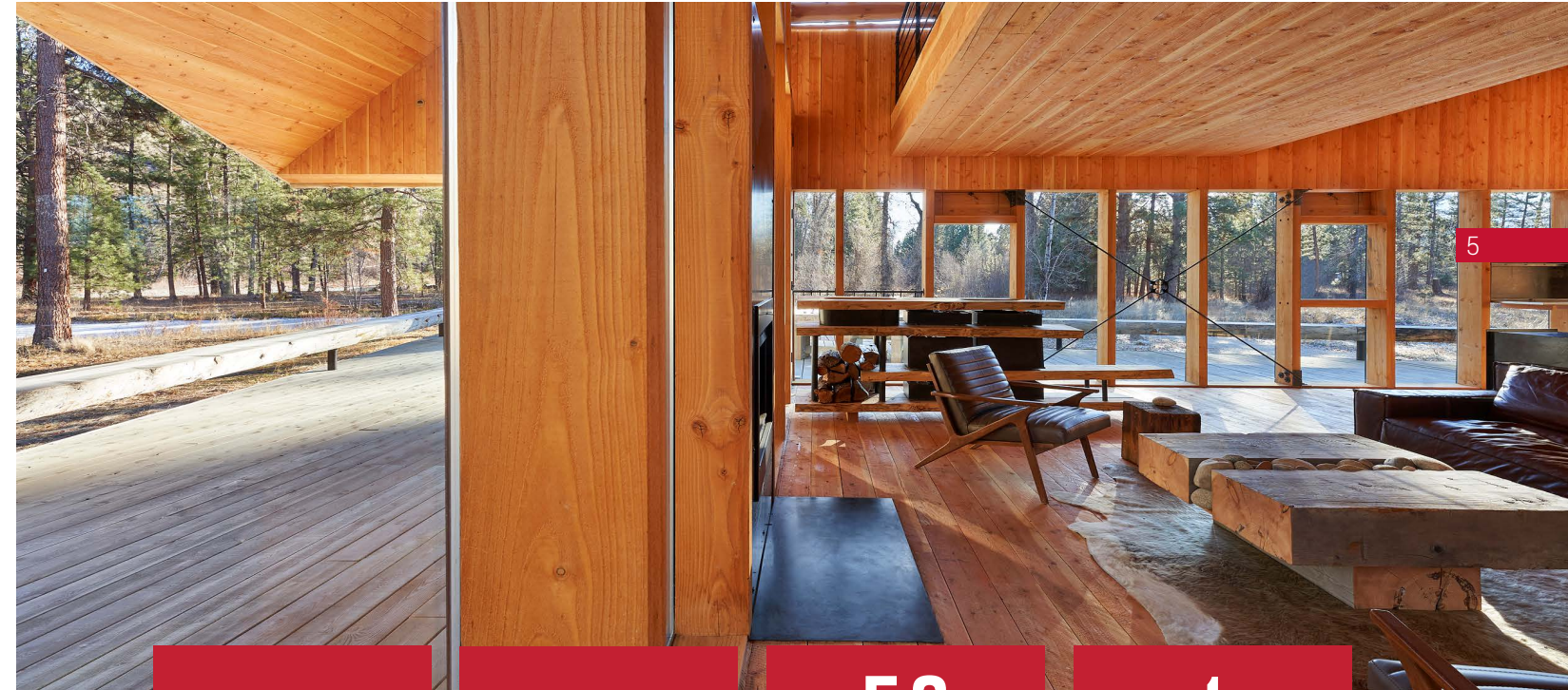
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THE CRESTA | LA JOLLA, CA



350+
employees
nationwide

16
offices

50
states licensed in
(+ multiple Canadian
provinces)

1
Motto:
*Service, Innovation,
Value*

FIRM PROFILE

DCI Engineers has been providing client-focused structural and civil engineering services for 33 years. Our office locations are spread up and down the West Coast, including Washington, Oregon, California and Alaska; the Mountain States of Colorado and Montana; the East Coast, and Texas. These sixteen offices employ over 350 engineers and technical support staff. We are licensed in all 50 states as well as many Canadian provinces. In fact, DCI's completed project portfolio extends across North and South America as well as into Asia.

Why DCI?

Throughout our geographic growth, DCI has focused on making all of our offices highly connected. This connection includes sharing intellectual resources, physical resources, and workload. As a result of this close collaboration, our staff always has the assets and leverage necessary to successfully complete projects.

High-End, Single-Family Residence Experts

DCI's portfolio of high-end, single-family residences spans across the picturesque landscapes of North America including Arizona, California, Colorado, Idaho, Montana, North Carolina, Utah, Washington, Wyoming, Vermont and Alberta, Canada. Our projects range from intimate 3,500-square-foot homes to sprawling 35,000-square-foot estates, encompassing new constructions, renovations, and expansions. These architectural masterpieces feature a variety of building materials, including robust concrete, elegant wood-framed and timber structures, timeless stone veneer, sweeping structural steel, and innovative hybrids. DCI excels in bringing these architectural masterpieces to life through our cutting-edge creativity and problem solving mind frame. The dream of that breathtaking cantilevered overlook, cozy fireplace, enchanting outdoor water wheel and drawbridge, scenic rooftop deck or seamless interior to exterior space will become a reality. The ingenuity of our engineering team shines through as they creatively tackle a multitude of building and property challenges, whether it's integrating a structure into a hillside or ensuring stability in high seismic or heavy snow load areas. DCI will be an integral part of the team that makes the vision into a home.



6 SERPENS TRAIL | BIG SKY, MT

HIGH-END RESIDENTIAL EXPERIENCE

SILHOUETTE HOUSE



ROST RESIDENCE, Telluride, CO, Locati Architects

YC LOT 309, Big Sky, MT, John Maniscalco Architecture

SCULLY RESIDENCE, Bozeman, MT, Intrinsic Architecture

6 SERPENS TRAIL, Big Sky, MT, Centre Sky Architecture

TRAIL CREEK RANCH, Livingston, MT, Centre Sky Architecture

MOONLIGHT OVERLOOK LOT 11, Big Sky, MT, Reid Smith Architects

HUNTE RESIDENCE, Hamilton, MT, A&E Design

MCCARTHY RESIDENCE, Big Sky, MT, Miller-Roodell Architects

ROBBINS RESIDENCE, Honolulu, HI, Turkel Design

RIVER'S EDGE RANCH, Ketchum, ID, Bohlin Cywinski Jackson

WINTERFELL, Big Sky, MT, STUDY Architects

BUTTERFLY HOUSE



HARAKA HARAKA RESIDENCE & GUEST HOUSE, Lake Toxaway, NC, Platt Architecture

FARRENS RESIDENCE, Whitefish, MT, Altius Design Group

DAVIS RESIDENCE, Jackson, WY, Baxter Design

LINDBERGH LAKE HOUSE, Seely Lake, MT, Centre Sky Architecture

144 ANDESITE RIDGE, Big Sky, MT, BOSS Architecture

LUCKY 13 RESIDENCE, Jackson, WY, Concept 7 Designs

JACKSON RESIDENCE, Jackson, WY, Bohlin Cywinski Jackson

TOPA ROCKS, Big Sky, MT, Olson Kundig

ANDESITE RIDGE LOT 8, Big Sky, MT, Peninsula Architects

MAISON, Tucson, AZ, STUDY Architects

GRIFFIN RESIDENCE, Jamestown, NC, Locati Architects

HILL RESIDENCE, Big Sky, MT, Legends Studio, Inc.

COONAN RESIDENCE, Nashville, TN, Dreaming Creek

YC LOT 713, Big Sky, MT, Northworks Architects and Planners, LLC

LOT 25 AT 3 CREEK RANCH, Jackson, WY, Locati Architects

THE WILLSON RESIDENCES, Bozeman, MT, Comma-Q Architecture

LIBERTY LANES PROJECT EQUINOX, Missoula, MT, MMW Architects

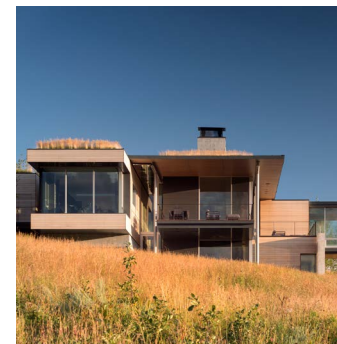
COLEMAN RESIDENCE, Big Sky, MT, StudioH Design

BECHEK RESIDENCE, Woodland, UT, Shelter Kit

BUTTERFLY RESIDENCE, Calgary, AB, Bohlin Cywinski Jackson

KANE RESIDENCE, Incline Village, NV, A&E Design

JACKSON RESIDENCE





Silhouette House

Darby, Montana

TEAM
Lazor
Massey Consturction

SIZE
3,500-sf | 2 stories

MATERIAL
Wood

DCI provided structural services for this modern design cabin which features a roof with a partial 18-foot cantilever. The design presented some challenges as there is glass around the entire perimeter of the building, so the team came up with a solution of 4x12 timber posts at four to six feet on center with a steel rod cross bracing for lateral force.

Additionally, the structure is elevated three to four feet off the finished grade on Helical Pier "stilts" to lift the cabin out of the flood plain. To help support bending load transmittal on these Piers, the team designed welded battered (angled) piers onto the vertical piers to brace the system laterally.

KEY FEATURES

- » Located in the Bitterroot Valley of Montana, the project combines historical and modern architecture with the appearance of a simple homesteader's barn at the exterior.
- » Interior pathways, balconies and gathering spaces frame the surrounding river and mountains, creating an encompassing feel of Montana's outdoors.
- » Featured in the January/February edition of Dwell Magazine





6 Serpens Trail

Big Sky, Montana

TEAM

Centre Sky Architecture

SIZE

9,515-sf | 2 stories

MATERIAL

Concrete, Steel, Wood

KEY FEATURES

» Capitalizing on its surroundings, the structure features mono-slope roof lines that lift to optimize surrounding views while reclaimed lumber adds a rustic Montana feel.

This high-end single-family residence is a two-story, newly built home with extensive glass at the west and north elevations. The house features interior and exterior fireplaces; garage; full basement; mudroom bridge spanning between the main residence and the garage; mechanical/storage space; and an exterior patio space.

As the engineer of record, DCI Engineers worked closely with the architect to achieve the open floor plans and large windows in heavy snow and seismic country. Exposed steel parallel chord trusses at the roof allow for a long, open span. Steel moment frames were included for much of the lateral force resisting system to achieve the large window layouts. The building has a stiffened foundation system due to the poor soils and old landslides at the site.



TEAM
Bohlin Cywinski Jackson
Cox Construction, Inc.

SIZE
11,895-gsf | 2 stories

MATERIAL
Steel, Concrete, Wood

Jackson Residence

Teton County, Wyoming

A retired Wyoming couple relied on the creativity of the architect and project team to produce their modern two-story countryside dream home. The “L” shaped home contains full height glazing to bring in natural light and to showcase the surrounding majestic landscape. Jackson Residence features four bedrooms, two bathrooms, a three-car garage, two concrete fireplaces, two dens, two family rooms, two outdoor decks, a spacious kitchen, dining room, spa room, basement level, and a separate caretaker/guest house. In the main residential building, primary living spaces are on the upper floor for easier accessibility for the owners.

The concrete elements of the residence contribute to thermal massing and wildfire protection. The home’s green roof section minimizes heat loss.

DCI Engineers was the structural engineer of record for the Jackson Residence. The engineers considered the factors that the home is both in a high seismic and high snow region. These regional factors informed their design of all the structural components from the roof to the foundation. DCI developed the home’s primary foundation, floor framing, roof framing, and shear wall plans, as well as the connection details.



KEY FEATURES

- » Jackson Residence features four bedrooms, two bathrooms, a three-car garage, two concrete fireplaces, two dens, two family rooms, two outdoor decks, a spacious kitchen, dining room, spa room, basement level, and a separate caretaker/guest house
 - » A unique feature to the home is the cantilevered glass study deck that overlooks the valley
- » The engineering team designed structural systems to support the architects’ vision of minimalist spaces, generous floor-to-ceiling height, and cantilevered decks and patios



TEAM
Jonathan Segal, FAIA

SIZE
5,477-gsf | 2 stories

MATERIAL
Concrete

The Cresta

La Jolla, California

DCI Engineers performed structural design services for this new modern contemporary, two-story luxury residence with a basement level and two-car garage. Built on challenging terrain, The Cresta is fitted with glass walls and large glass doors that open the expansive floor plan to the outdoors. It is constructed completely out of cast-in-place concrete. House amenities include a rooftop jacuzzi, reflecting pool, and lap pool (for southern California aesthetics and thermal cooling).



KEY FEATURES

- » Built on challenging terrain, The Cresta is fitted with glass walls and large glass doors that open the expansive floor plan to the outdoors
- » House amenities include a rooftop jacuzzi, reflecting pool, and lap pool (for southern California aesthetics and thermal cooling)

AWARDS

- » 2014 Residential Architect Magazine Grand Award Single Family Residence
 - » 2016 AIA Honor Award

This two-story structure contains a 2,238-sf basement and subterranean car lift. The property totals 5,480-sf including 1,646 on the first floor and 1,593 on the second floor.

DCI calculated and determined exact curing times for strengthening the building's CIP walls and floors.



The Butterfly House

Calgary, Alberta, Canada

TEAM
Bohlin Cywinski Jackson

SIZE
3,500-sf | 2 stories

MATERIAL
Wood, Concrete, Steel

Designed for minimum impact, this two-story private residence takes its name for the layout with sweeping cantilever roof structures. Primary construction for the Butterfly House is standard concrete foundations below conventional lumber and manufactured wood. While using standard materials, the project utilized highly efficient framing that keeps members small and out of the way, allowing the architectural push for expansive views of the nearby Elbow River and downtown Calgary. The rear deck, which cantilevers out 12 feet, also utilizes light member moment frames to create a relatively column free space and artistic multi-level staircase.

KEY FEATURES

- » The architect's progressive and artistic approach pushed the limits of material capacities and layout options with an open floor plan and minimal environmental impact goal.
- » The exterior staircase further enhances the grandiose look of the project, using spliced plate element risers that meet cantilevered elements of the deck, stretching the unsupported structure to over 30 feet out.



Haraka Haraka Residence

North Carolina

This private single-family residence is in the mountains of North Carolina. DCI factored in area wind loads when designing the framing systems for the 16,000-sf main building and separate 4,100-sf guest house. The single-story home has a walkout basement, a spacious great room, extensive interior and exterior stonework, wood-burning fireplaces, wood siding, glazing, and expansive glass. Structural timber elements support the roof and floors. Steel components were also used throughout the residence and hidden from direct view to maintain a high-end mountain lodge look.

The structural engineering team conducted detailed 3D modelling of the timber framing system for analysis and design. They also worked with Big Timberworks, Inc. to design the connections and joinery for these heavy timber elements.

TEAM

Platt Architecture
Big Timberworks, Inc.

SIZE

20,100-sf | 2 stories

MATERIAL

Steel, Concrete, Wood,
Masonry

KEY FEATURES

- » DCI conducted detailed 3D modelling of the timber framing system for analysis and design, working with Big Timberworks, Inc. to design the connections and joinery for these heavy timber elements.
- » Structural timber elements support the roof and floors while steel components were also used throughout the residence and were hidden from direct view to maintain a high-end mountain lodge look.



Photo © Jerry Markatos



TIM PATTERSON, PE, SE

BOZEMAN, MONTANA



Tim Patterson has over 20 years of professional experience working in the public and private sectors. His project portfolio varies from single-family residential and commercial building renovations, municipal, hospitality, and recreational facility projects. Tim's true passion lives in the world of high-end residential homes and the unique challenges they present. Pushing the boundaries of engineering and materials to make a client's dream home a reality keeps him inspired and excited to come to work every day.

PROFESSIONAL TITLE:

Associate Principal

EDUCATION:

B.S. Civil Engineering,
Montana State University, 2001

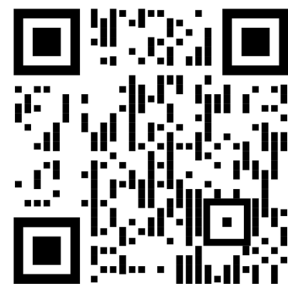
REGISTRATION:

Civil: MT, OR, ID, NC
Structural: UT, ID

PROFESSIONAL SOCIETIES:

Structural Engineers Association of
Montana (SEAMT)

National Council of Structural
Engineers Associations (NCSEA)



CONTACT

HARAKA HARAKA RESIDENCE, Lake Toxaway, NC, Platt Architecture

RIVER'S EDGE RANCH, Ketchum, ID, Bohlin Cywinski Jackson

REED RESIDENCE, Truckee, CA, Locati Architects

SAGE GUEST LODGE, Emigrant, MT, Jensen Fey Architects

MAISON, Tucson, AZ, STUDY Architects

GRIFFIN RESIDENCE, Jamestown, NC, Locati Architects

K38 RANCH, Granite County, MT, Miller-Roodell Architects

ZANDER RESIDENCE, Lake Toxaway, NC, Platt Architecture

SPRINGHILL OVERLOOK, Bozeman, MT, Concept 7 Designs

COLEMAN RESIDENCE, Big Sky, MT, StudioH Design

CHRISTOPHER RESIDENCE, Jackson, WY, Miller-Roodell Architects

EVERIST RESIDENCE, Melrose, MT, Cikan Architects

WINTERFELL RESIDENCE, Big Sky, MT, STUDY Architects

REED RESIDENCE, Big Sky, MT, Miller-Roodell Architects Ltd.

ROST RESIDENCE, Telluride, CO, Locati Architects

EMERY RESIDENCE, Jackson, WY, Locati Architects

ROBBINS RESIDENCE, Honolulu, HI, Turkel Design

ELK SAGE RANCH, Big Sky, MT, Miller-Roodell Architects

MADISON VALLEY RANCH LODGE, Ennis, MT, Cushing Terrell

BECHEK RESIDENCE, Woodland, UT, Shelter Kit

HILLS RESIDENCE, Bozeman, MT, Cikan Architects

FOUR CREEKS RANCH RESIDENCE, Big Timber, MT, Locati Architects

PEYTONVILLE RESIDENCE, Southlake, TX, Locati Architects

WHITNEY ACHTER, PE

BOZEMAN, MONTANA



With more than a decade of professional experience, Whitney has contributed to a wide range of projects including high-end residential, large mixed-use, commercial buildings, and residential remodels. Having lived and worked in resort mountain towns, Whitney thrives in the complex design of high-end residential projects, especially when accounting for high seismic and snow loading requirements. With a sharp eye for detail, she brings a blend of technical expertise and creative problem-solving to the project.

PROFESSIONAL TITLE:

Project Manager

EDUCATION:

M.S., Structural Engineering,
Colorado State University, 2013

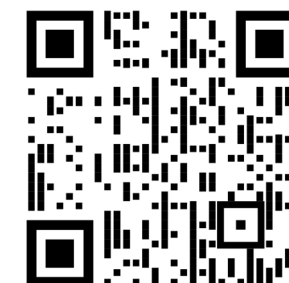
B.S., Architectural Engineering,
Kansas State University, 2011

REGISTRATION:

Civil: WY

PROFESSIONAL SOCIETIES:

Structural Engineers Association of
Montana (SEAMT)



CONTACT

REED RESIDENCE, Big Sky, MT, Miller-Roodell Architects

LOOKOUT RIDGE MAIN & ESTATE HOUSES, Whitefish, MT, Locati Architects

YELLOWSTONE CLUB EGLISE DUPLEX 11, Big Sky, MT, Locati Architects

6 SERPENS TRAIL - YC 428, Big Sky, MT, Centre Sky Architecture

THE MERIN, Bozeman, MT, SMA Architecture + Design

BRIDGER BASECAMP, Aspen, CO, Turkel Design

YELLOWSTONE CLUB EGLISE DUPLEX 3, Big Sky, MT, Locati Architects

YELLOWSTONE RIVER RUN, Big Sky, MT, Miller-Roodell Architects

YELLOWSTONE CLUB LOT 754, Big Sky, MT, Locati Architects

WESTLAKE SANTA CLARA APARTMENTS, Santa Clara, CA, LPAS

BRIDGER VIEW REDEVELOPMENT, Bozeman, MT, Comma Q Architects

EMERY RESIDENCE, Jackson, WY, Locati Architects

ONE 11 LOFTS, Bozeman, MT, SMA Architecture + Design

REED RESIDENCE, TRUCKEE, CA, LOCATI ARCHITECTS

FARMERS BANK HELENA, Helena, MT, SMA Architecture + Design

MOONLIGHT OVERLOOK LOT 11, BIG SKY, MT REID SMITH ARCHITECTS

TETON RAPTOR CENTER, Wilson, WY, The Kubala Washatko Architects

TOPA ROCKS, Big Sky, MT, Olson Kundig

144 ANDESITE RIDGE, Big Sky, MT, BOSS Architecture

FORTRESS OF SOLITUDE, Flathead Ridge, MT, Locati Architects

TOLLENS-CORTADO RESIDENCE, Stratton, VT, Turkel Design

BODETTII RESIDENCE, Jackson, WY, Turkel Design

ONE & ONLY WHISKEY SHACK, Big Sky, MT, Olson Kundig

SAMANTHA FOX, PE, SE

BOZEMAN, MONTANA



Samantha Fox, who learned from the best local engineers at the firm, is our leading technical expert on evaluating and retrofitting historic park structures. She has conducted numerous seismic assessments and developed upgrade plans to the satisfaction of many architectural and national park clients. In past high profile projects, Sam's scope of work ranged from detailing an entire roof structure upgrade for the Yellowstone Lake Lodge to recommending longevity improvements for the Montana State Capitol Building. Gaining insight with every field visit, Sam's investigations and extensive code review experience makes her an ideal resource for preserving meaningful built environments while integrating up-to-date lifesafety requirements.

PROFESSIONAL TITLE:

Associate Principal

EDUCATION:

M.S. Civil Engineering,
Montana State University, 2013

B.S. Civil Engineering,
Montana State University, 2011

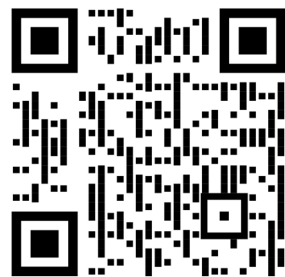
REGISTRATION:

Civil: MT
Structural: ID

PROFESSIONAL SOCIETIES:

Structural Engineers Association of
Montana (SEAMT)

National Council of Structural
Engineers Association (NCSEA)



CONTACT

YC LOT 309, Big Sky, MT, John Maniscalco Architecture

YC LOT 750, Big Sky, MT, Centre Sky Architecture

6 SERPENS TRAIL, Big Sky, MT, Centre Sky Architecture

TRAIL CREEK RANCH, Livingston, MT, Centre Sky Architecture

BIG 5 RANCH, Big Timber, MT, Centre Sky Architecture

SPANISH PEAKS RANCH 11, Big Sky, MT, Centre Sky Architecture

MEADOW VIEW 13, Big Sky, MT, Centre Sky Architecture

YC LOT 36, Big Sky, MT, Centre Sky Architecture

MOONLIGHT OVERLOOK LOT 11, Big Sky, MT, Reid Smith Architects

MOONLIGHT OVERLOOK LOT 10, Big Sky, MT, Centre Sky Architecture

DIAMOND HITCH 26, Big Sky, MT, Centre Sky Architecture

MOOSEWOOD RETREAT 73, Big Sky, MT, Centre Sky Architecture

LINDBERGH LAKE HOUSE, Seely Lake, MT, Centre Sky Architecture

144 ANDESITE RIDGE, Big Sky, MT, BOSS Architecture

YD RANCH 5, Big Sky, MT, Centre Sky Architecture

YC LOT 58, Big Sky, MT, Centre Sky Architecture

TOPA ROCKS, Big Sky, MT, Olson Kundig

ELK RIDGE LOT 48, Big Sky, MT, Centre Sky Architecture

THERMAL CLUB RESIDENCE, Thermal, CA, BOSS Architecture

ANDESITE RIDGE LOT 8, Big Sky, MT, Peninsula Architects

SETTLEMENT CABIN REMODELS, Big Sky, MT, Centre Sky Architecture

YC LOT 713, Big Sky, MT, Northworks Architects and Planners

SETTLEMENT LOT 3, Big Sky, MT, Centre Sky Architecture

JON LOVGREN, PE, SE

BOZEMAN, MONTANA



Jon has experience in a wide range of residential and commercial projects using heavy timber, light framed wood, concrete, and steel systems. He also has experience in a variety of renovations ranging from small scale additions and remodels to full seismic retrofits for historic buildings. He has a strong background in structural analysis software and enjoys using the most up-to-date technology and programs to streamline the design process and improve efficiency for projects.

PROFESSIONAL TITLE:

Associate

EDUCATION:

M.S., Civil Engineering,
Montana State University, 2012

B.S., Civil Engineering,
Montana State University, 2011

REGISTRATION:

Structural: ID
Civil: MT

PROFESSIONAL SOCIETIES:

Structural Engineers Association of
Montana (SEAMT)



CONTACT

EGLISE MOUNTAIN DEVELOPMENT, Yellowstone Club, MT, A&E Design, Locati Architects

GANNON RESIDENCE, Big Sky, MT, Locati Architects

STOCKFARM CLUBHOUSE, Hamilton, MT, A&E Design

JACKSON RESIDENCE, Jackson, WY, Bohlin Cywinski Jackson

SHODAIR CHILDRENS HOSPITAL, Helena, MT, SMA Architecture + Design

WHOLE FOODS, Bozeman, MT, Collaborative Design

KANE RESIDENCE, Incline, NV, A&E Design

SCULLY RESIDENCE, Bozeman, MT, Intrinsik Architecture

DAVIS RESIDENCE, Jackson Hole, WY, Baxter Design, Inc.

CONGEL RESIDENCE, Skaneateles, NY, Kestrel Construction Services

HUNTE RESIDENCE, Hamilton, MT, A&E Design

CURRAN RESIDENCE, Bozeman, MT, Concept Seven Designs

BUTTERFLY RESIDENCE, Calgary, AB, Bohlin Cywinski Jackson

VANHEUVELAN RESIDENCE, Red Lodge, MT, Nicholas Modroo Designs

2400 SETON, Austin, TX, Lincoln Ventures, LLC

17TH & GUADALUPE, Austin, TX, Rhode Partners

CAPITAL HILL BUILDING A, Helena, MT, SMA Architecture + Design

HYATT PLACE, Bozeman, MT, Mitchell Development & Investments

BOWDEN EVENT CENTER TIMBERFRAME, Keller, TX, Texas Timber Frames

STRUCTURES OF LANDSCAPE - TIPPET RISE ART CENTER, Fishtail, MT, On Site Management

GRANT VILLAGE LODGE RENOVATION, Yellowstone National Park, WY, Think One



for more information

contact

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Bozeman, Montana 59718

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tpatterson@dc-engineers.com