# ON Arnold STEEL

***Barry Arnold. Principal. Vice President. ARW Engineers, Ogden, Utah. Started his career with ARW in 1985 as a drafter. Received master's degree in engineering in 1991. Received the 2007 Engineer of the Year award from Utah Engineers Council. Loves nature for its structures. Uses steel to create what he sees.***

**STARTING OUT** "I wanted to be an architect. I started working in an engineer's office and enjoyed the speed at which projects went through my office. There were 10 projects on and off my desk in a week, or sometimes in a day. Engineering is very exciting. Architects make a building beautiful and interesting, but engineers are the people who make them stand up."

**FLEXIBILITY** "ARW works on a large variety of projects, but my greatest interest and affection is in steel design. Every designer finds that, despite their best efforts, no project can be perfect; problems happen. Steel provides the simplest and easiest solutions to fix any problem. With steel there's always an easy solution to any problems. If a beam's a little short, you can weld something on. If you need to move a column 10 feet, with steel, it's easy. If your concrete beam is short or a column needs to be moved – you've got a big problem with no easy solution. Steel keeps the projects flowing and going, no matter what type of building it is. I'm happiest when I'm designing in steel… Steel is not nearly as frustrating as other materials – there's always an economical solution in steel."

**GREEN** "My love of steel wasn't a huge epiphany, it was a growing appreciation of its characteristics and qualities, you know, the nature thing. It only takes working on one or two projects in other materials to make you wish you were designing in steel. You know the design would have been so much easier with steel; it's just so much more predictable. Steel allows for expression in combination with simplicity of design. If an owner is thinking long-term about the environment and building flexibility, steel's the only answer. With everything going green, steel is a natural choice because it's revered as a recyclable material. LEED is making an impact now, and in years to come, it will be a significant driving factor. With steel, it's easy to make LEED points and points with your clients."

**LEARNING** "The inspiration I get personally comes from when I attend AISC seminars or go to AISC conferences. There's a plethora of new ideas and innovation available through AISC. Information is presented in a neat, orderly format. You can come back to your office and use the ideas and information immediately. It's always applicable to the projects you're working on today. AISC gives you all the backup and support you need. If you ask a question, AISC responds very quickly."

**TEAMWORK** "Teamwork is very important… Engineers can be very opinionated. If you ask 20 engineers how to solve a problem, you'll get 20 different answers and that's a good thing. They're all slightly different answers, but they're all correct. You have to keep options open. We tend to gravitate toward what we've done before and many times, that turns out to be a solution that includes steel.

Everyone has that 'manual' in their head of how to do things and that's okay. The young engineers like to test the old engineers as much as the old engineers like to test them, but one thing we all seem to end up having in common is a deep appreciation for what steel can do that other materials can't. We review lessons learned on projects weekly in our office. Everybody has a say. We talk freely and openly without egos getting in the way. We're one unified company, with 20 different people thinking about the options. You get to pick one answer. And most of the time the answer you pick will center around steel and its seemingly unlimited capabilities."

**PRIDE** "I have no dreams about a special project that I'd like to do one day. I've devoted myself to being proud of every single job I worked on – regardless of whether it's big or small, or designing the whole building or a few connections. I do what needs to be done every day. I don't put my professional ego on display and say, 'look at all these buildings we've done."

**INSPIRATION** "I have a huge appreciation for the environment. In fact, I can see the Wasatch Mountain Range from my office. Being outdoors helps me appreciate my responsibility and obligation to future generations. Engineers have an ethical obligation to protect our natural resources; it's your way of contributing to all of mankind. My work directly affects the environment – I'm humbled by that fact. I find inspiration when I'm in our National Parks and take in the grandeur and majesty of it all, and understand that we all have an obligation to preserve these spaces and our resources for future generations. You get a much bigger perspective out there."

**STEEL** "If you look at modern steel construction, you will see some exciting innovation going on. I've seen a lot in my career but I know the best is yet to come. Steel is like a good friend – reliable, strong, tested and trustworthy – that has supported me, as I interpreted the architects' concepts to make their dream a reality. That's what young engineers really need to know. That's the power of steel."