

Can-Do Success

With an Expanded Superior Base and Clients in Other Countries, AMI Consulting Engineers Grows by Taking On Complex Projects

By Patrick Lapinski

AMI Consulting Engineers, P.A. was founded less than a decade ago in 2006, when Chad Scott and business partner Craig Jouppi decided to strike out on their own. Breaking away from the Duluth-based firm they'd been with surprised many, but it made perfect sense to the two engineers.

Scott is AMI's president, principal and manager of the marine engineering department while Jouppi serves as vice president, chief financial officer and manager of the structural engineering department. Today, this young and vibrant company is located on the Connor's Point development area of the Superior waterfront and has 22 full-time staff and three temporary employees.

"We set out to found a company that focused on the different types of structural engineering, and hence, the name AMI came about. It basically stands for architectural, marine and industrial structures," Scott explained. "We believed in providing just real straightforward, honest service, good communication, integrity, doing it for a reasonable fee and working with people on a more one-on-one personal experience."

His father was an independent contractor, so Scott developed a strong knowledge of commercial and residential construction while growing up. But his self-professed forte is marine engineering. After graduating from Duluth Cathedral, Scott spent seven-plus years as an active duty U.S. Marine prior to attending college. That experience helped define his interest in engineering, as did enrolling in a deep sea diving school in Camden, N.J., where he enhanced his skills.

Jouppi followed a similar path, being indoctrinated into the family logging and road construction business at a young age while growing up in nearby Isabella, Minn. Driving through the Twin Cities and seeing the tall buildings or the big bridges in Duluth further piqued his interest. "The question was always 'How do those work?'" Jouppi said. "I think that

was kind of the beginning of the transition from civil engineering in general to more of a structural emphasis."

Scott and Jouppi met in 1998 while working at a local engineering and architectural firm. The decision to raise their own children in a healthy, clean environment had led each of them back to the Twin Ports region, where they had been brought up with strong core values. Over the following nine years, the two men developed the strong working relationship and personal friendship that led to the formation of AMI and continues today.

"One of our first projects in 2006 was to design a facility for testing systems that would clean ballast water," said Scott. The project, known as the Great Ships Initiative (GSI), is located on the former Elevator O site in Superior's East End. GIS is a project of the Northeast-Midwest Institute (NEMWI), a private, nonprofit, nonpartisan research organization based in Washington, D.C. The initiative is carried out collaboratively with contracting entities that include AMI, University of Wisconsin-Superior, University of Minnesota Duluth and Broadreach Services.

"We were given basically a bench scale or schematic level design from a client and we helped build that facility," said Scott. AMI designed the facility, then helped build it from the



In 2010, AMI Consulting Engineers P.A. moved its corporate office location from Duluth to 91 Main St. in Superior. AMI also has a branch office in Virginia, Minn.

"We set out to find a company that focused on the different types of structural engineering."

— AMI PRESIDENT CHAD SCOTT



Business partners and longtime friends Chad Scott (left) and Craig Jouppi. Scott is AMI's president, principal and manager of the marine engineering department. Jouppi is vice president, chief financial officer and manager of the structural engineering department.

ground up in a remarkable period of eight months. "We now manage and operate the facility for them. Their staff and biologists from UWS still coordinate and run all the tests, but we help them operate the facility," he said.

Scott's knowledge and experience in marine engineering has garnered him a reputation in the Port of Duluth-Superior area as the go-to expert when it comes to the structural integrity and redesign of docks and buildings within the harbor.

"It was Chad who raised the concern back about 12 years ago about the unusual corrosion going on in the harbor," said Jim Sharrow, facilities manager for the Duluth Seaway Port Authority. Nobody in the port was aware of the significance of the issue until Scott brought it to the attention of local authorities. "He was a licensed engineer doing the diving inspections of docks and he noted this very unusual corrosion," Sharrow said, that rivaled saltwater corrosion.

Scott's discovery led to a number of scientific studies that eventually pinpointed the cause as a metallurgical reaction between the steel sheet pilings,

"It was Chad [Scott] who raised the concern ... about the unusual corrosion going on in the harbor."

— FACILITIES MANAGER JIM SHARROW, DULUTH SEAWAY PORT AUTHORITY

bacteria and copper sulfide found in the harbor water. AMI has subsequently been involved in applying practical solutions to protect and extend the life of affected structures, including a \$6 million repair of the dock facings for the Port Authority. In 2013, Scott received an award from the American Society of Civil Engineers for presenting a technical paper he helped author about the corrosion in the Duluth-Superior Harbor.

Jouppi and Scott built their business from the ground up, adding clients through word of mouth and reputation. Since opening their doors, AMI has been involved in a variety of underwater site inspections and structural engineering projects in Superior. Their successful work on the Great Ships Initiative led to other projects, including dock restorations for Hallett Dock Co., Fraser Shipyards and Cenex-Harvest States, as well as civil engineering work at Barker's Island and the Arrowhead Bridge fishing pier.



Environmental Department Manager Bryan Murdock, photographed on AMI's marina dock. The company built a boat launch and some docks for smaller crafts that opened last July.

"Right now we're involved in the development and design of a pulverized limestone addition for Graymont, down the street from our office," said AMI's Kevin Full, a structural engineer. "The assignment at Graymont was to design

When Lafarge made the decision to consolidate its cement handling and distribution operations in Superior, the company was already using AMI to evaluate its storage silos' structural integrity and retained AMI to further appraise the property in preparation for putting it on the market. It was at this point that Sandy Hoff, president of F.I. Salter Co. Inc. – a commercial real estate firm and current co-lead developer of the Pier B project – was introduced to AMI. With the Pier B site surrounded by water on three sides, Hoff said he feels quite fortunate to have inherited Scott's engineering experience from his previous work with Lafarge.

Included in the scope of the \$30 million Pier B development are a 140-room resort hotel complex, a waterfront restaurant, a transient marina with amenities such as summer boat and kayak rentals

efficiency modifications to fit into a very small geographic footprint. The scope of work consisted of equipment layout, dust collection and drying systems and a new 800-ton storage and load-out silo structure, along with multiple miscellaneous alterations to existing structures."

"That challenge is a personally satisfying example of a cross-functional project – exactly the kind of work that brought him to AMI. "This involved a very collaborative approach with us, the clients, our own mechanical, structural and civil engineers," Full said.

It's the same across the harbor in Duluth, where AMI performs structural analysis and hydrographic soundings for the Duluth Seaway Port Authority and engineering for the Port Authority's upcoming \$16 million renovation of the Garfield C & D dock. AMI also has an ongoing relationship with the developers of the Pier B project at the former Lafarge Cement terminal property along Railroad Street.



Senior Structural Engineer/Project Manager Kevin Full

"I needed someone who knew how to drive sheet pile, who has worked with the Corps of Engineers ... who understands water flow."

— PRESIDENT SANDY HOFF, FL. SALTER, CO., INC.

and a pedestrian bridge connecting the development to the adjacent Bayfront Festival Park. To get the project moving, Hoff and the project's numerous investors needed an engineering firm with a solid grasp of building on a waterfront.

"It's a different type of analysis and approach when you're developing a property on the waterfront," Hoff explained. "There's ... expertise that you don't get, or that most engineers don't have, when you're upland. I needed someone who knew how to drive sheet pile, who has worked with the Corps of Engineers in the past on permitting, who understands water flow and wave attenuation systems and the dynamics of the Duluth harbor."

For the Duluth Economic Development Authority (DEDA), working with waterfront properties such as Pier B poses a number of environmental concerns that must be mitigated before development can take place. Heidi Timm-Bijold, DEDA's business resources manager, is responsible for overseeing several million dollars in grant money awarded to the City of Duluth designated to clean up the property. She's been working closely on the Pier B project with Bryan Murdock, AMI's environmental manager.

Murdock explained that when AMI engineers a structure, particularly on old marine locations such as Pier B, there's usually a history of industry and contaminants that require his expertise. "It's a wonderful mix of engineering and environmental every time we go to do some work on one of these piers," he said. "We have to strike a fine balance. We're working for corporate, we're working for governments; we sort of sit in the middle and just try to do what's best for our customers and meet the regulations."

Murdock grew up in southwest Iowa, graduating from Mankato State with a degree in biology and joining AMI last August is a move he's happy to have made. "I think what drives me to this is I get to solve environmental problems and protect the environment - and I satisfy my need of getting to work with great people," he said.

Working closely with AMI's various governmental clients is Murdock's bai-



Structural Engineer Chase Dewhirst

liwick, a position DEDA's Timm-Bijold appreciates. "I think they're a company that continuously strives to improve," she said. "They pride themselves on being responsive. And frankly, I think they also know how to have fun and to make it enjoyable to work with them. Their reputation is also that of really high-caliber, principled people. I'm grateful they're one of my people."

"Their reputation is also that of really high-caliber, principled people."

— DEDA BUSINESS RESOURCES MANAGER HEIDI TIMM-BUOLD

An advertisement for the Toyota Tundra. At the top left is the "MADE IN AMERICA" logo featuring a blue star in a red circle. To the right, text reads "WORK READY | FAMILY TOUGH | ALL-NEW TOYOTA" above the word "TUNDRA" in large, bold, metallic letters. Further right is the "KARI TOYOTA" logo with the tagline "experience the difference" and the website "www.karitoyota.com". Below this, it says "The All-New Toyota Tundra is Now Available at Karl Toyota." The main image shows three Toyota Tundra trucks parked in a row: a red one in the foreground, a dark grey one in the middle, and a silver one in the background. At the bottom, contact information is provided: "www.KarlToyota.com | 1002 Tower Ave., Superior WI 54880 | 715.394.4429 or 800.236.4429".

Structural Engineer Chad Skrocki reviews project data.

In 2008, to accommodate its growth, the formerly Duluth-based AMI began looking for a new home, a place to comfortably house engineering teams, centralize support facilities and provide a waterfront launching base for the engineering diving division as well as Nordic Underwater Services, the underwater construction services firm AMI launched in January 2014. Jason Serck, the City of Superior's planning and port director, knew he had an ideal location for AMI – a property a little over an acre in size on the end of Connor's Point.

"It was kind of a small piece of property, so it was going to be a specialty kind

of use," said Serck. "Chad and I sat down and discussed it and eventually he brought a proposal to essentially purchase the property. He bought it from the bank and then we entered into an agreement with Chad and Craig to help them construct the office building that they have down there, and ... we put in a little bit of money from the tax increment side just to help them out with the project."

AMI's working relationship with the City of Superior has been fantastic, said Jouppi. "They've really been exceptional to work with. They've really taken the position that they want to grow the city, they want to expand the job base and the tax base in the city and they want to support small businesses," he said.

The deal has turned out to be a great investment for both the city, which expanded its tax and employment base, and for AMI, which now has a space with room to expand. "Phase two included a small additional land purchase," noted

Serck. "It's gone into the private marina sector and has put in a boat launch as well as some docks for smaller crafts, and we put in [some] dollars for improvements there as well." The small craft facility, Connor's Point Cove Marina, has 40 slips and opened last July.

Having a solid base of operations with room to expand allows AMI to focus on its core value of serving customers and creating unique solutions to solve their problems. One ongoing AMI project is consultation and support for the Army Corps of Engineers' Olmsted Dam project on the Ohio River. One of the largest dams being built in the United States, the Olmsted project incorporates an "in-the-wet" construction method through which



Office Manager April Thomas

"They've really been exceptional to work with. They've really taken the position that they want to grow the city."

– AMI VICE PRESIDENT CRAIG JOUPEI

BEACON BANK

IS PROUD TO INTRODUCE THE NEWEST MEMBERS OF OUR TWIN PORTS TEAM, **BRETT KINNEY & STACEY JOHNSON**

Investing time to build relationships today and in the future.

Brett Kinney
Vice President
Business Banking
218-788-9945
bkinney@beaconbank.com
NMLS-MLD #612034



Stacey Johnson
Vice President
Business Banking
218-788-9943
sjohnson@beaconbank.com
NMLS-MLD #891423



WWW.BEACONBANK.COM

Responsive. Reliable. Reassuring.

“Working to build 3,000 feet of new dock wall to accommodate Panamax-sized vessels in an earthquake zone was very challenging”

— AMI MARINE ENGINEER CHASE DEWHIRST

major components are built on land and then set in place as needed.

“One of the things we do probably better than anybody here is we’ve always excelled on doing specialty type projects for people,” said Scott. “AMI has been collaborating with engineers on the Olmsted project for over six years now. If they have prob-



AMI Consulting Engineers is known for its engineering inspection in marine environments.

lems during construction, they bring those to AMI and say, ‘Help us solve them.’”

Being tasked as the “problem solvers” results in some unique challenges for AMI. For example, putting his road construction knowledge to use led Jouppi to help design an unusual, one-of-a-kind tool to grade the bottom of the Ohio River on the upstream side of the dam in preparation for placement of large pre-assembled dam sections. “It’s 60 feet long, 10 feet high and is attached to the back of a large barge,” Jouppi explained as he described the “somewhat simplistic” blade he designed to grade at depths of 30 to 50 feet in the mile-wide river. “I don’t know that there’s ever been another one built like that in the world, so it was pretty unique. They were really pleased with it and it’s holding a half-inch tolerance vertically and it’s really working great.”

From Scott’s perspective, working on such projects fulfills AMI’s drive to create while helping their clients. “More than anything, I love helping people. This is such a natural way for me to do that,” he said of the company’s clients. The scope of AMI’s work has expanded well beyond the Twin Ports and their work on the Iron Range to include certification for design and engineering in 26 states and collaboration on large international projects – including a port project in Jamaica and a new harbor and port project in Haiti.

AMI engineers were contracted to help design an entirely new shipping container port in Haiti after the 2010 earthquake devastated existing infrastructure. AMI is working collaboratively with the GB Group to conduct site grading and design storm water systems, new warehouse buildings and a power plant for the Port of Laiteau project.

Marine Engineer Chase Dewhirst, an engineering graduate from the University of Minnesota and AMI’s resident engineering dive manager, finds the scale of the project mind-boggling. “Working to build 3,000 feet of new dock wall to

Arrowhead Printing

YOUR SUPERIOR
ENGINEERING RESOURCE



Consulting Engineers P.A.

- ARCHITECTURAL
- MARINE
- INDUSTRIAL
- MECHANICAL
- CIVIL
- ENVIRONMENTAL

CORPORATE HEADQUARTERS
91 MAIN STREET
SUPERIOR, WI 54889
715.718.2193
www.amlengineers.com

PROVIDING SUPERIOR
UNDERWATER SERVICES

- CONSTRUCTION
- REHABILITATION
- SALVAGE
- HULL CLEANING
AND INSPECTION
- UNDERWATER
BURNING & WELDING



CORPORATE HEADQUARTERS
4236 LINDAHL ROAD
HERMANTOWN, MN 55811
218.461.0386
www.nordicuw.com

Nordic Underwater Services is a member of the CLA Local 84



Payroll and Accounts Receivable/Accounts Payable Manager Chris Sward

accommodate the Panamax-sized vessels in an earthquake zone was very challenging," he said. "From the waterline to the mudline is about 40 feet, so we were designing two elevations of tie-backs due to the extreme height of the wall and the draft of the vessels." Panamax vessels are ocean-going cargo ships capable of passing through Panama Canal lock chambers. Typically, these vessels have a 50,000 to 80,000 deadweight tonnage capacity and are 965 feet long with a 106-foot beam and 39.5-foot draft.

Closer to home, just across the Connor's Point peninsula, Fraser Shipyards has been working with AMI engineers for annual inspections of its dry docks, hydrographic surveys of water depths in the shipyard and on all three phases of Fraser's dock wall restoration project - including the environmental assessment and permitting portion of the final phase along the Baxter embayment. AMI

provides the expertise of a well-qualified third-party between the shipyard and the City of Superior, the project grant provider, to monitor the contract for quality assurance.

"They are extremely responsive," said Tom Curelli, Fraser Shipyards' director of operations. "They add a level of expertise which most ports don't have." And he finds AMI's knowledge of marine engineering unparalleled in his experience. "I've never found anybody any better in all my work. They have huge, historical background knowledge of the port. They have a passion for it," Curelli said. "And they can tell the history of just about any dock facility as far as where it originated, [and] its initial use and construction to its latest use and construction."

While AMI's mission to provide high-quality work for clients is paramount to success, creating and maintaining a positive, energizing place to work and develop is equally challenging and exciting for Chad Scott and Craig Joupji.

"They have huge, historical background knowledge of the port. They have a passion for it."

- FRASER SHIPYARDS DIRECTOR OF OPERATIONS TOM CURELLI



- Business I.T. Services
- New and Refurbished Computers
- Virus & Malware Removal
- Tune-Up & Speed Up Your PC
- Laptop & Desktop Repairs
- On-site & Remote Service

discoverpc.NET
computer solutions center

sales@discoverpc.net
715-398-6767 or 218-260-4137
1402 Tower Ave, Superior, WI 54880

RJS also Specializes in River Reconstruction



For nearly 60 years we've constructed roads, facilities, bridges and many other heavy structures - and now we've added **RIVER RECONSTRUCTION** to our areas of expertise.

We thank the Lake Superior Steelhead Association for recently having us place two 24,000-pound stones into the Knife River to form a jumping pool that helps migrating trout.

**GENERAL CONTRACTOR | COMMERCIAL BUILDING
HIGHWAY/HEAVY INDUSTRIAL/MARINE
EQUIPMENT RENTAL**

RJS CONSTRUCTION GROUP, LLC | SINCE 1956
1 CLOUGH AVENUE, SUITE 200
SUPERIOR, WISCONSIN 54880
715-394-7771 | RJSCompanies.com



They focus on running their business while providing the best place to work for their team members. "I love the dynamic nature of it, the constant challenges that come at you day after day," said Jouppi. "Whether it's insurance, whether its payroll, whether it's dealing with your consultants, clients, project demands and staff needs - I love it all. It's awesome."

Scott and Jouppi both take to heart values they yearned for when they returned to the Twin Ports and strive to carry those values over to the workplace. So far, Scott thinks they're spot on with their approach and that AMI is on the right track.

Evidently employees feel the same way. Join in or initiate a conversation with AMI team members and you'll immediately hear unbounded energy and enthusiasm for their work, their clients and colleagues, as well as the collaborations these interactions bring to each project.

"AMI is kind of a gem," said Kevin Full, who left his long-term engineering

job in the Twin Cities to be part of AMI. "On each project, we strive to put ourselves in our client's shoes to see their problem from their perspective and to understand their business intimately. Working at AMI, you learn something new each and every day you come into work."

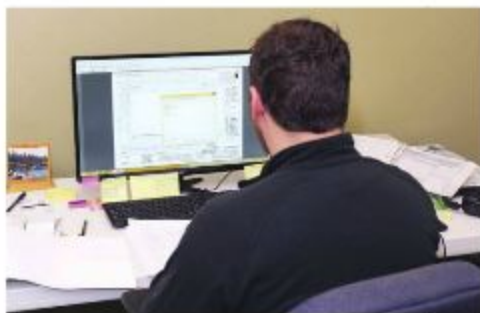
"I like the versatility," added Chase Dewhirst. "We do a lot of different projects. I could be diving one day or I could

be designing a dock wall the next. This summer I was part of a team that did some inspection of a sewer system for the City of Duluth that was through a tunnel that was 50 feet down and blasted through bedrock," noted the LaCrosse, Wis., native. "Very few people have been in that tunnel since it was built in

the early 1900s," he said of the cavern located beneath downtown Duluth.

"I love where we're at with the company," said Scott. "We have such a positive group of people with a can-do attitude. They're positive, upbeat and friendly. Everyone gets along really well and it really is just like a family." ■

Piotr Lapinski is a freelance writer and a native of Superior.



Structural Engineer Michael Kleven reviews project information.

We welcome you to all our Twin Ports locations!

HOT FOOD

Coffee • Cappuccino
Espresso Drinks • Dairy
Bread • Bakery • Ice Cream
Frozen Yogurt • Sandwiches
Hot Dogs • Snacks • Candy
Beer • Cold Drinks • Juice
Soup • Salad • Produce
Fruit • Water • Propane
Ice • Stamps • Gift Cards

Karuba[®] GOLD
HOT or ICED
\$2.49 - \$2.99

Genuine Espresso Drinks

ESPRESSO • AMERICANO
MOCHA • CAPPUCCINO • LATTE
ICED LATTE • ICED AMERICANO
ICED MOCHA • ICED MACCHIATO

*Customize your beverage!
Add Caramel, Hazelnut or Vanilla
to your favorite coffee drink.*

Premium MEATS

KITCHEN ORIGINALS

30 MINUTE MEAT LOAF OR PASTA