

Keeping pace

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Despite a range of challenges, the massive Mazda Toyota Manufacturing construction project in Huntsville, Alabama, is meeting milestones with the help of SSMRC millwrights.

Union millwrights are playing a key role in construction of the \$1.6 billion, 3.7 million-square-foot Mazda Toyota Manufacturing plant in Huntsville, Alabama.

“It’s the biggest thing going on in the Southeast right now,” said Clint Smith, business representative for Millwright Local 1192, which covers Alabama, Mississippi and part of the Florida panhandle.

The plant is slated to begin production in 2021 and will produce up to 300,000 vehicles per year – 150,000 units of a future Mazda crossover vehicle and up to 150,000 units of a Toyota SUV. Mazda and Toyota announced their plans to build a joint U.S. plant in 2017, and a ceremonial groundbreaking event was held at the 2,400-acre site in late 2018.

Monty Hagstrom, senior manager of production engineering for Toyota Motor North America, noted that unlike many auto-manufacturing construction projects, this one started from scratch – with no existing building or infrastructure. Roads, utility lines, industrial-waste systems, and more all had to be built or installed. A railroad line was even rerouted to supply the plant.

Overlapping activities between building construction and equipment installation also create challenges. Multiple buildings comprise the plant, and the site will house production facilities for 10 parts suppliers as well.

Millwrights’ work

Members of the Southern States Millwright Regional Council began working at the site in January of 2020 and likely will be part of the construction team through July of 2021. They are installing all processing equipment in the plant, including conveyor systems that haul vehicles through miles of assembly lines and robots that paint and weld together body panels after massive, three-story-tall presses stamp them out. At the height of the project, millwrights will provide approximately 35% of the jobsite’s total manpower, Smith said. He expects the project to employ 700 to 1,000 millwrights through partnerships with at least eight contractors.

The auto-manufacturing plant is not only giving Local 1192 members an abundance of man-hours – it’s providing those



LEFT: Millwrights are installing all processing equipment, including conveyor systems and robots that will paint and weld body panels.
RIGHT: Local 1192 member Milton Shelton anchors a robot base in the Toyota welding area of the plant.

work opportunities close to home. “The majority of 1192 members travel,” Smith said. “This will give some of them who probably hadn’t worked at home more than six weeks out of a year in the last 10 years the opportunity to work at home.” Even those who can’t commute to the site every day can easily travel home on weekends, Smith continued.

Calder Manley, a Local 1192 member with a 30-minute commute to the Mazda-Toyota jobsite, said he’s used to spending months away from home, working in other states. “I’m loving it,” Manley said of his work in Huntsville. “I love being here at the house. I love that we’re getting as many hours as we’ve been getting. There couldn’t be a better job.”

Manley, a millwright steward who has been working at the plant with contractor Trade-Mark Industrial since Jan. 16, said SSMRC millwrights have been doing robot layout and installation and conveyor work, and expect to do more of the same.

“A whole lot more work needs to be done,” Manley said in May. “There are other buildings that haven’t got anything in them yet.”

The first step when millwrights go into an open area of the plant is layout – determining and marking where robots or conveyor equipment should be installed. Mazda/Toyota engineers provide detailed drawings. Millwrights identify the monument or column line referenced in the drawing, then begin the layout. “They hand us a print and say, ‘Here’s your numbers. Go out there and make some lines on the floor,’” Manley said. By ensuring precise measurements from the beginning, millwrights make certain all equipment will be installed accurately.

To set each robot, a millwright positions it over the layout marks, brings it to proper elevation, ensures it is level, and anchors it. The placement has to be exact. Elevation tolerance for the robots is plus or minus a millimeter, and leveling tolerance is within half a graduation, Manley said. “It really needs to be perfect, though,” he added.

If not, the Toyota or Mazda teams that check millwrights’ work will note the error or programming the robots will take longer than it should. “We’ve been doing really well,” Manley said.

Al Bolton, project manager for Trade-Mark Industrial, backs up that comment. Bolton has been a millwright himself for 28 years and has worked in auto plants for two decades. “I would put these millwrights against anybody I ever worked with,” he said.

Contractor relationships

Because Mazda Toyota Manufacturing chose to build the Huntsville facility using union labor, all contractors at the site are working under a building trades project labor agreement. “I think the past productivity of all the building trades played a big part in Mazda Toyota Manufacturing choosing to go union,” Smith said.

Jeff Smith, SSMRC Central Region director, said labor capacity was an important consideration as well. “We’ve got the manpower to build that size of a plant,” he said.

In addition to working with Trade-Mark Industrial, SSMRC millwrights will provide labor for contractors D.H. Griffin, Duncan Machinery Movers, Elk River Mechanical, D&D Machinery Movers, Johnson Contractors, Standard Prime LLC, and more. The SSMRC has a long-running relationship with Trade-Mark and has worked previously with all the aforementioned companies except one, a non-union contractor that will install conveyors for the paint shop and part of the assembly line in the Toyota portion of the plant. If union millwrights perform well at Mazda Toyota Manufacturing, Clint Smith said, the contractor will consider signing the local collective bargaining agreement and continuing to pursue opportunities within the Local 1192 jurisdiction.

Trade-Mark Industrial, which is based in Cambridge, Ontario, Canada, and has a U.S. branch in Frankfort, Kentucky, is responsible for installation of all process equipment in the Toyota portion of the welding shop. SSMRC millwrights working with Trade-Mark have been unloading, uncrating, and placing robotic welding cells that will be used in sub-assembly and major body assembly of the Toyota SUV.

Bolton said SSMRC millwrights are extremely well-trained, safe workers who have enhanced Trade-Mark’s relationship with Toyota. “They haven’t even used a Band-Aid,” he said.

The flexibility of the SSMRC organization and the millwrights' productivity also have helped keep Trade-Mark on schedule despite a range of unexpected challenges, Bolton said.

Staying on schedule

Monty Hagstrom with Toyota said he's seen obstacles at the Huntsville site that he hasn't experienced with any other project in 20 years. Rain almost every day in February, March, and the first half of April created challenges with building construction. Then the dew point and humidity were just right many days to produce fog and condensation inside partially completed structures.

Trade-Mark began work at the site on schedule, because Toyota wanted the contractor to do what it could to maintain the construction timeline, but parts of the floor were missing and some parts of the building were still affected by weather conditions, Bolton said.

The manpower curve Bolton had expected and Smith had agreed to provide was significantly altered. Delays in calling in millwrights were followed by requests for large numbers of workers with little notice. "They were really flexible with us on supplying manpower when we needed it and supplying the numbers we needed," Bolton said of Local 1192.

The millwrights themselves have helped keep the job on track as well. "Their attendance has been excellent, and their attitudes have been excellent," Bolton said. "Because of the excellent productivity out of people here, we've maintained schedule. That means we're doing extremely well."

COVID-19-related challenges and precautions

COVID-19 also has slowed the project and added hurdles. Early in the year, equipment millwrights were supposed to install was held up in China due to shipping delays related to COVID-19.

Hagstrom said Mazda Toyota Manufacturing and its contractors have taken many steps to protect workers at the site from COVID-19. MTM's safety measures in response to the virus include social distancing, more frequent cleaning, additional hand-washing and sanitizing stations, increased supplies of hand sanitizer and sanitizer wipes in worker break areas, daily audits to identify worksite areas needing improvement, and a detailed COVID-19-related analysis of more than 500 jobs.

Trade-Mark Industrial addresses COVID-19 in daily safety talks. When employees report to work each day, they answer a COVID-19-related questionnaire, and those with symptoms have to leave the site and get tested. In the break area, 100 tables are spaced 6 feet away from one another. Every time a worker leaves a table, an employee cleans it with bleach. Two employees work full time sanitizing break areas, tools, and equipment. When employees work in close proximity to one another, they must wear masks and gloves.

"The millwrights and Trade-Mark have set the standard for this plant and shown that even with the challenges of COVID-19, work can be completed safely and efficiently," Bolton said.

Generations of opportunity

Smith and Bolton noted the Mazda Toyota Manufacturing plant will provide millwright work opportunities even after



FROM LEFT: Monty Hagstrom, senior manager of production management for Toyota Motor North America, Clint Smith, business manager of Local 1192, and Al Bolton, project manager for Trade-Mark Industrial

construction ends. Maintenance will be ongoing, and model changes every few years will call for millwright skills. "A plant like this creates opportunities for union trades for generations of work," Bolton said.

Trade-Mark and similar contractors typically make an investment during construction of facilities such as the MTM plant in Huntsville with hopes of earning maintenance contracts and the long-term employment opportunities they provide, Bolton said. That's what the contractor did with the Toyota Motor Manufacturing plant SSMRC millwrights helped build in Blue Springs, Mississippi. Trade-Mark maintains a full-time maintenance crew, including SSMRC members, at the site. If the company sets up a crew at the MTM plant, it will employ SSMRC millwrights as well, Bolton said.

SSMRC member Calder Manley said he hopes to continue working with Trade-Mark at the site for years to come. "This is at least two years of work for me, possibly longer, he said. "I'm hoping to be in the shop here and possibly run the shop one day."

Demonstrating the value of union labor

Bolton said all millwright activities have gone smoothly and information from Mazda Toyota Manufacturing has facilitated workflow.

"Millwrights are showing the client it made the right choice going with union trades for this job," Bolton said. "The client continues to compliment millwrights on this project, and they should be really proud of themselves."

Hagstrom said despite the challenges the project has faced, "there have been great rewards, many construction milestones met, and opportunities to collaborate with our business partners to help us complete construction and reach start of production. Mazda Toyota Manufacturing has a strong relationship with the Southern States Millwrights on this project, with good communication and collaboration. We appreciate the continued support of the millwrights to make this project successful." ⚙️