

Kettering University GM Mobility Research Center



DON'T WAIT FOR THE
FUTURE, **DRIVE IT.**

Kettering
UNIVERSITY

The GM-Kettering Mobility Research Center (MRC) Proving Grounds and Harris Annex debuted in 2018 on the Kettering University campus in Flint, Michigan. It is located on the original site of the Chevrolet Division of General Motors and, like all of Kettering University, it is deeply rooted in a history of innovation. Today, the MRC continues this rich legacy as a world-class proving ground for manufacturers, OEMs, start-ups, suppliers, and a variety of competitions – all committed to driving mobility innovation. The 21-acre facility features a customizable track, advanced research and development capabilities, and convenient accessibility that will ensure that your product and project development needs are met. The MRC also offers personalized support in the form of convenient scheduling, onsite project management, and available faculty expertise and graduate student assistance. Our goal is to help you reach your goal.

CUSTOMIZABLE TESTING FACILITIES

The crown jewel of the MRC is our customizable all-weather test pad and track, built to racetrack performance specifications with low-speed handling loops, elevation and surface changes, and straightaway distances of up to 500 feet. Whether you are testing fuel-saving strategies, connectivity solutions, steering systems, or driver assistance technologies, you will find that this test environment offers the performance and safety capabilities needed to robustly evaluate your product.

TRACK FEATURES AND SAFETY SPECS

TRACK:

- › 3.25-acre customizable test pad
- › Course is flat to within .25 inches in any 10-ft. section
- › Course has no seams and a consistent 1% slope for drainage
- › Low-speed handling loops with double lane change, s-Turn, chicanes, elevation changes, and flexible route changes
- › Vehicle-to-Vehicle (V2V), Vehicle-to-Infrastructure (V2I), and Vehicle-to-Everything communication (V2X)
- › Ability to test Intelligent Transportation Systems Architecture (ITS)

SAFETY:

- › Gravel run-off areas along the dynamic pad and road course
- › Full member of the International Committee for Proving Ground Safety (ICPGS)
- › Kettering University Campus Safety available for overnight storage security

ONSITE EQUIPMENT:

- › Stadium lighting
- › Leveling pad used to zero and calibrate sensors
- › Traffic signals and road signs
- › Water accessible to wet road surfaces
- › Distributed electrical access
- › Lane-marking paint, construction cones and barrels
- › Safety vests and radios
- › Drone available for photography and video



THE MRC PROVIDES EVERY AMENITY WE COULD ASK FOR INCLUDING WELL-MAINTAINED AND SMOOTH DRIVING SURFACES, VARIED TERRAIN, ELECTRICITY, OFFICE AND GARAGE SPACE, AND RESTROOMS AS WELL AS OUTSTANDING STAFF.

SQUARESTONE
EDUCATION NETWORK

BARB LAND
EXECUTIVE DIRECTOR



Kettering University
GM Mobility
Research Center

RESEARCH AND DEVELOPMENT

The 3,000 square-foot Harris Research Annex is the ideal basecamp for your project and personnel. Located in the northwest corner of the MRC, the Annex features a heavy-duty two-post vehicle lift, secured spaces for prototype development, an observation balcony, and much more. In addition to its technical capabilities, the Annex provides onsite amenities for research and collaboration, including a conference room, labs, and office space.

HARRIS RESEARCH ANNEX TECHNOLOGIES

- › Level-II EV charging stations
- › Private 4G LTE network at 10x the data speed of current cellular networks
- › GPS base station
- › NVH test equipment
- › V2X DSRC
- › Intelligent transportation infrastructure



CRASH SAFETY CENTER

Housed in the Mott Science and Engineering Center across the street from the MRC, the Kettering University Crash Safety Center (KSC) is an established resource for studying structural crash mechanics and passenger safety. Utilizing an array of advanced instrumentation including anthropomorphic test devices and high-speed video cameras, this facility can run highly precise tests on the effectiveness of various crash safety systems: airbags, seatbelts, and child restraint systems, in frontal, side, rear, and rollover crash modalities. The KSC has been utilized in testing and developing products and standards adopted by the U.S. Department of Transportation and the National Highway Traffic Safety Administration. While custom test apparatuses can be implemented, the core testing is completed using a pneumatic deceleration sled with a 2,000-pound payload capacity, a top speed of up to 42 mph, and peak decelerations above 70 G.



ONSITE PROJECT MANAGER

Our resident Connected and Autonomous Vehicle Technician, Scott LaForest, will serve as your on-site project manager. He leads a cross-functional team of mobility and connectivity experts, Kettering faculty, and Kettering graduate students. Having tested nearly every type of vehicle, equipment, and relevant technology, Scott and his team bring a wellspring of knowledge to the table, and will be available around the clock to support your team and troubleshoot any technical or logistical issues that arise.

THE MRC DIFFERENCE

The MRC is a go-to source for vehicle testing, research and development, and education, and provides custom solutions for start-ups and Fortune 500 companies alike. From crash testing to racetrack-quality road courses, our comprehensive capabilities and highly proficient on-site personnel make Kettering University the right choice to host your next testing project.

SCHEDULE YOUR PROJECT!

We are ready to take your questions, tackle your projects, and assist in your research. Contact us today to learn more or schedule your project!

810.762.9616 | MRC@kettering.edu

For technical questions, contact Scott LaForest at **810.762.7841** or slaforest@kettering.edu.



ONE OF OUR GOALS WAS TO CONNECT WITH FUTURE ENGINEERS. I WAS OVERWHELMED WITH THE SUPPORT OF THE FACULTY AT KETTERING UNIVERSITY! WE LOVED HAVING THE PRESIDENT, DEANS, PROFESSORS AND STUDENTS INVOLVED AND OFFERING THEIR TIME AND EXPERTISE. FROM THE INITIAL PLANNING MEETING TO THE RESULT OF A SUCCESSFUL EVENT, WE COULDN'T HAVE PULLED OFF WITHOUT THE HELP OF SCOTT LAFOREST AND THE INCREDIBLE FACULTY OF THE MRC.

WHAT I LIKED ABOUT MRC...

- › Large spectator outdoor area which could be set up with a tent and tables etc.
- › Indoor area to pull automobile in and view car's testing equipment and host technical presentations
- › Helpful MRC Faculty with technical expertise
- › Event coordinators offering detailed help
- › University affiliation and support

MÜLLER-BBM

KAREN HUTCHENS
DIRECTOR OF BUSINESS
OPERATIONS

Kettering University
GM Mobility
Research Center

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