

Discover Chelsea Proving Grounds

With 4000 acres and 50 tracks comprised of nearly 100 miles of test surfaces.



“The Real Secret to Success is...Enthusiasm”

- Walter P. Chrysler

History of the Chelsea Proving Grounds

A 70+ year history of determination and dedication to develop a world class proving ground. Step through time as we go through a brief history and how Chelsea Proving Grounds (CPG) became what it is today.



1954 - CPG Opens for testing

When testing on Detroit roads was no longer feasible Chrysler sought out land in Chelsea, Michigan to begin the development of a testing facility. After years of preparation and planning, CPG was ready to open its doors! The CPG dedication day had over 600 automotive writers and newsmen from the press, radio, and TV flocking to cover this momentous occasion.



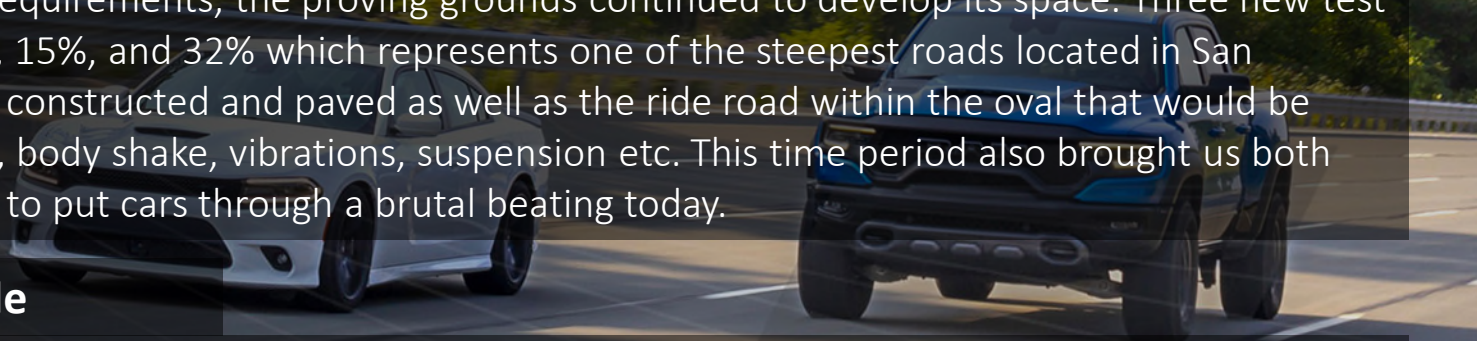
1979 – Proving Grounds Expansion

To keep up with testing and requirements, the proving grounds continued to develop its space. Three new test grades were developed – 7%, 15%, and 32% which represents one of the steepest roads located in San Francisco. The test circle was constructed and paved as well as the ride road within the oval that would be used for steering evaluations, body shake, vibrations, suspension etc. This time period also brought us both tortuous roads that continue to put cars through a brutal beating today.



2000 – A Modern Upgrade

The early 2000s were the Daimler years (1998-2007). It was a time when the now famous modern-day version of the HEMI® V8 first came out in the 2003 Dodge Ram pickup truck. There was a boom of new building construction at CPG that started with the Emissions Fueling building in 1997, the Brake Garage in 1998, Performance Garage in 1999, the Durability Office in 2000, the Corrosion Chambers in 2000 and Emissions North Soak in 2001. In 2007 the original concrete High Speed Oval track was rebuilt in asphalt.





CHELSEA PROVING GROUNDS



2022 - A New Era is Coming

2022 was a time of planning and preparation for the Electric Vehicle future under the new Stellantis umbrella. We completed installation of 18-AC Chargers and 10-DC Chargers in our test parking lots. An engineered design was done for 50 additional DC Chargers, along with a new powerhouse and an upgraded Consumers Energy substation to feed them power. The design was then implemented, and construction took place from 2023 to 2024 in preparation for EV testing and future vehicle development at CPG.



2023 – Daring Forward

Almost 70 years after its founding, Chelsea Proving Grounds is now open to external customers to provide state-of-the-art facilities for vehicle testing and development.

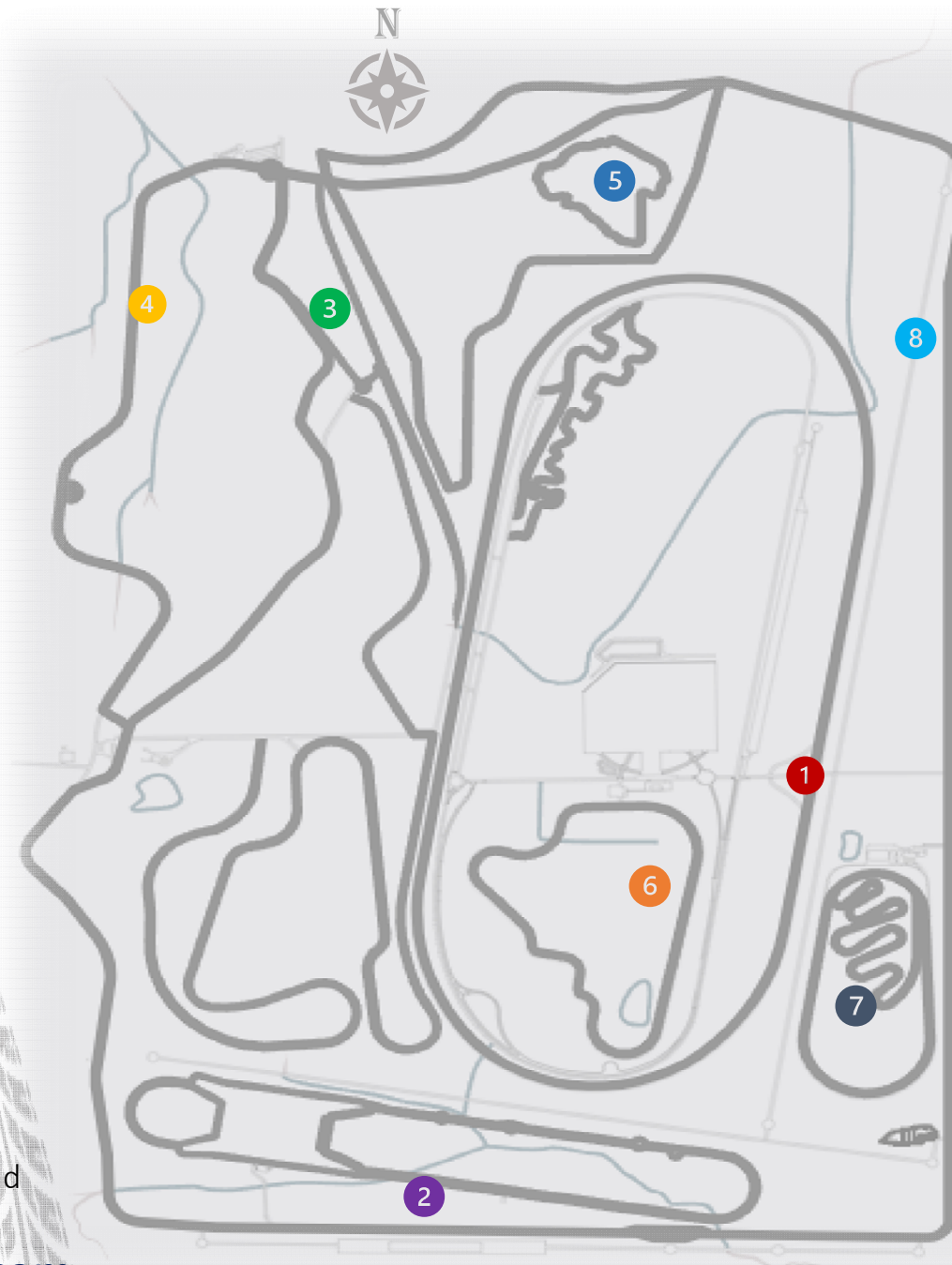
Track and Facility Rental Opportunities Available Now!

A TRACK FOR EVERY NEED

There is an incredible variety of tracks available for use. From low-speed special paving and surfaces such as the 9-lane event and serpentine to off road events that challenge your vehicle, to the high-speed oval test track when you have that need for speed. CPG is a seasoned vehicle development center that has helped create some of the best vehicles on the market. Located in South-East Michigan, CPG is able to provide all season testing to help prepare your vehicle for any condition.

Contact us for additional track information and opportunities today at:

www.chelseaprovinggrounds.com



- 1 THE OVAL**
3,757 ft. Straightaways | 1800ft Radius Curves | 6 Lanes
The oval track is perfect for high-speed durability, drive-train and vehicle component endurance, fuel economy measurements, brake performance, temperature measurements and calibration testing.
- 2 VEHICLE DYNAMICS FACILITY**
The Vehicle Dynamics Facility consists of 1200 ft. x 1000 ft. rectangular asphalt test surface with asphalt paved loops at the east and west ends to accommodate the acceleration and deceleration of vehicles as they enter and leave the dynamics test surface. The facility covers approximately 27 acres and has a 1% slope for water runoff.
- 3 TEST GRADES**
Vertical Incline | Brake Testing | Driveline
CPG offers three test grades open year-round to test traction control, driveline, brakes etc. in any weather condition.
- 4 CHALMA**
Rough surface | Ups and downs | Durability
Chalma Road duplicates the conditions once found on a road near Chalma, Mexico; includes many different types of bumps, ruts, road surfaces and road conditions. Chalma Road is used for accelerated endurance, durability and special tests.
- 5 EAST OFF ROAD**
Obstacles | Challenging | Off Road Development
The trail is natural terrain with various obstacles such as; logs, rocks, ditches, sand trough, holes, and dirt banks. The primary purpose of this trail is for demonstration, development, training and testing.
- 6 EVALUATION & HANDLING ROAD**
Tight curves | Sprinkler system | Variable speed testing
The Evaluation and Handling Road is 1.7 miles long with numerous tight curves, super elevations, and straights consistent with handling and road course design. Testing consists of both subjective and instrumented events designed for sub-limit and limit evaluations.
- 7 LATERAL LOAD ROAD**
The Lateral Loads Road is a 1.4-mile road located within the ADR Test Facility. The road has nine hairpin turns, asphalt pavement lane, and a 1% pitch for drainage. It is used primarily to evaluate and test lateral force load input into the vehicle
- 8 NORTH SOUTH STRAIGHTAWAY**
Three main types of tests are conducted on this facility: Wide Open Throttle Accelerations, Coast downs "neutral" decelerations and Urban Fuel Economy Cycles. There are 80-foot diameter turnaround pads on both ends.

...and **MANY** more

STELLANTIS

Chelsea Proving Grounds has been testing and validating vehicles for almost 70 years and is finally opening its doors to provide others with the same opportunity. CPG has every test you need to develop and bring your car to market – plus a little extra. Visit our contact page to get connected and learn about our full range of services.

FULL RANGE OF VEHICLE SERVICES:

- Autonomous Vehicle Testing
- Impact Barrier / Safety Sled
- Rollover Simulation
- Hot / Cold Chambers
- Wind Tunnel
- Emissions Dev and Cert
- Robotic Mileage Accumulators
- Propulsion Calibration
- Performance / Fuel Economy
- Brake Systems Dev and Cert
- Durability
- Corrosion Chambers
- Instrumentation
- Water Fording
- Dynamics / Instrumented Handling
- Center of Gravity Swing
- NVH Development
- Pass-By Noise Certification
- Coast Down

Chelsea Proving Grounds
3700 S MI State Road 52, Chelsea, MI 48118

CONTACT US

www.chelseaprovinggrounds.com



TRACKS, ROADS & EVENTS

- 1 OVAL TEST TRACK
- 2 N/S STRAIGHTAWAY
- 3 NINE LANE EVENTS
- 4 RIDE ROAD
- 5 CHALMA ROAD
- 6 EVAL & HANDLING
- 7 20%/30% GRADES
- 8 LATERAL LOAD RD
- 9 SOUP BOWL
- 10 N/S TORTUROUS
- 11 E/W STRAIGHTAWAY
- 12 CROSS COUNTRY
- 13 7%/15% GRADES
- 14 ADR
- 15 32% GRADE
- 16 SERPENTINE FACILITY & 100MM BUMPS

FACILITIES

- A IMPACT ROLLOVER
- B ADAS
- C PAVE INADV. AIR BAG
- D SLALOM INADV. AB
- E SKID TRACTION
- F WATER TROUGH
- G BRAKE/SPLASH SOAK
- H PASS-BY NOISE
- I AWD HILLS
- J MUD TROUGH
- K CRASH BARRIER
- L MILEAGE DYNOS
- M CORROSION
- N IMPACT LAB
- O WIND TUNNEL
- P VEH DYNAMICS FAC
- Q ENG. GARAGES & OFFICES

RENTAL GARAGES

- a DEFENSE BUILDING
- b GROUNDS GARAGE
- c QOUNSET HUT
- d MOPAR GARAGE
- e ADR BUILDING

OFF ROAD & GRAVEL

- I EAST OFF ROAD
- II LYMAN TRAIL
- III TROUTMAN TRAIL
- IV GRAVEL LOOP
- V NORTH GRAVEL
- VI TANK SECONDARY

TRACKS, ROADS & EVENTS

OVAL TEST TRACK 3,757 ft. Straightaways | 6 Lanes | 4.71 Miles

- The oval track is perfect for high-speed durability, drive-train and vehicle component endurance, fuel economy measurements, brake performance, temperature measurements and calibration testing.

NORTH – SOUTH STRAIGHTAWAY 2 Lane | 80 ft pads | 2.23 Miles

- Three main types of tests are conducted on this facility: 1) Wide Open Throttle Accelerations (0 to 100 mph +), 2) Coast downs “neutral” decelerations (80 to 20 mph), 3) Urban Fuel Economy Cycles (stop and go low speed, 15 to 35 mph). There are 80- foot diameter turnaround pads on both ends.

NINE LANE EVENTS 9 Lanes | 9 Different Surfaces | 0.5 Miles

- The test surface consists of 9 lanes each with a different testing surface. The consists of the following unique road surfaces:
- 1) Uneven asphalt, 2) Brushed grooved concrete, 3) Smooth flat asphalt, 4) Coarse flat asphalt, 5) Primary ride events, 6) South Endurance Rd, 7) Smooth flat concrete with step up ad step down, 8) Light cobblestone / Manholes, and 9) Smooth concrete with cleats.

CHALMA ROAD Rough surface | 6 Events | Durability | 1 Mile

- Chalma Road duplicates the conditions once found on a road near Chalma, Mexico; includes many different types of bumps, ruts, road surfaces and road conditions. Chalma Road is used for accelerated endurance, durability and special tests.

EVALUATION AND HANDLING Sprinklers | Variable Speed testing | 1.7 Miles

- The Evaluation and Handling Road has numerous tight curves, super elevations, and straights consistent with handling and road course design. Testing consists of both subjective and instrumented events designed for sub-limit and limit evaluations.

TEST GRADES: 7% / 15% / 20% / 30% / 32% Vert Incline | Brake Test | Driveline

- CPG offers test grades open year-round to test traction control, driveline, brakes etc. in any weather condition.

LATERAL LOAD ROAD ADR | Lateral Force | 1.4 Miles

- The Lateral Load Road is located within the ADR Test Facility. The road has nine hairpin turns, asphalt pavement lane, and a 1% pitch for drainage. It is used primarily to evaluate and test lateral force load input into the vehicle.

EAST – WEST STRAIGHTAWAY 2 Lane | Brake Test | 1.59 Miles

- This facility is a long concrete surface straightaway. Brake Engineering is the primary user. Their testing includes: MVSS 105 Vehicle Brake Certification (30, 60, and 80 mph stops), Brake Balance Development, Specially scheduled Police Acceptance Tests

OFF ROAD & GRAVEL

EAST OFF-ROAD Obstacles | Challenging | Off Road Development

- The trail is natural terrain with various obstacles such as; logs, rocks, ditches, sand trough, holes, and dirt banks. The primary purpose of this trail is for demonstration, development, training and testing.

LYMAN TRAIL Off Road | Minor Challenges | Beginner Course

- Lyman Trail is an off-road evaluation course located inside the Ride Road. The Trail is a “two track” lane incorporating minor challenges of rough ground, small grade, soft roadbed, sharp turn, sand trap and close tree and brush features.

RENTAL GARAGES

DEFENSE BUILDING 3 Lifts | Maint., Store & Offices | 3,636 Sq/ft

- Nestled in the back of the complex, the defense building is perfect for the development of 1-3 test cars. Equipped with hoists, storage room, and office area, your team will be able to set up camp and create your own satellite office space.

GROUNDS GARAGE 5 OH Doors | Maint., Store & Offices | 8,300 Sq/ft

- The Grounds Garage provides adequate space and security to ensure your testing needs are met. Recently upgraded Epoxy flooring throughout and high-speed fiber internet available..

QUONSET HUT 2 In-out Door | Maint. & Store | 7,222 Sq/ft

- The Quonset is a spacious garage perfect for team use and vehicle development. The Quonset is nestled in the back of the complex ensuring you have privacy when working on your vehicles.

MOPAR GARAGE 3 OH Doors | Maint. & Store | 1,500 Sq/ft

- The Mopar® Garage is in the center of the complex with quick access to the oval and right next to the evaluation & handling road. Making this the perfect garage for quick diagnosis and adjustments to your vehicle. Typically reserved for daily renters.

ADR BUILDING 4 Doors & Lifts | Maint., Store & Offices | 11,893 Sq/ft

- Located in the middle of the grounds, the ADR building is an easy access point to any road on the grounds, including the ADR and LLR roads right out back. The two-story office space and garages provide a great space for groups with a need for multivehicle testing.

FACILITIES

SKID TRACTION 5 Lanes | 30 ft X 1000 ft | 1,500 Sq/ft

- The test surface consists of five lanes, 30 feet wide by 1000 feet long, with various coefficients of friction. The surfaces are generally described as burlap finish concrete, troweled concrete, basalt tile, porcelain tile and checkerboard.

WATER TROUGH Water Splash | Electrical Circuits | Engine Components

- The Water Trough is used to create road water splash on to electrical circuits, and other engine components in the engine compartment. It is used to evaluate splash shield design and to perform engine water ingestion testing.

BRAKE/SPLASH SOAK 600 ft X 10” | 100 ft X 24” | Splash Troughs

- The splash troughs for observing splash patterns and conducting brake recovery tests.

PASS-BY NOISE Exterior Noise| Propulsion System | Engine Components

- The Pass-By Noise Site is located at the East end of the Skid Traction Facility and is used to measure overall exterior noise. Precision noise measuring instrumentation and noise level recording equipment are used in conjunction with an instrumented vehicle parked adjacent to the test area.

MILEAGE DYNOS 24 Vehicle | Automated | Computer-Controlled | 10,384 Sq/ft

- The mileage accumulator is an open air automatically run 24 vehicles simultaneously on computer-controlled dynamometers, exactly as they are accelerated and braked on the durability roads.

CORROSION 3 Corrosion Chambers | 12 Vehicles | 8,950 Sq/ft

- The Corrosion facility consists of 3 full vehicle corrosion chambers with capacity to hold 4 vehicles per chamber. This facility also includes a dynamic drive through salt splash trough with halo sprays. Temperatures Range from 70F to 140F. Humidity Range is 30% RH to 95% RH. Saltwater Spray 120 liters per minute per vehicle.

CRASH BARRIER All Weather | Vehicle Crash Tests | Roll Overs | 18,495 Sq/ft

- The Covered Impact Barrier is a safety test facility for conducting vehicle-to-barrier crashes, vehicle-to-vehicle impacts, and roll over tests.

IMPACT LAB Impact Sled | ATD “Dummies” | 140 ft rail | 72,000 Sq/ft

- The Impact Laboratory is a test facility where an impact sled, moving with dummy occupants on a rail system, simulates crash tests. Here, also test vehicles are prepared for impact and analyzed following impact.

WIND TUNNEL Aerodynamic Design | Wind Noise | 140 ft rail | 15,000 Sq/ft

- The Wind Tunnel is where cars and trucks are evaluated for aerodynamic design, air conditioning, wind noise, under hood temperatures, and engine cooling.

VDF 1200 ft x 1000 ft Surface | 2 paved Loops | 27 acres

- The Vehicle Dynamics Facility consists of a rectangular asphalt test surface with asphalt paved loops at the East and West ends to accommodate the acceleration and deceleration of vehicles as they enter and leave the dynamics test surface.