



DETROIT STYLE

CAR DESIGN IN THE MOTOR CITY, 1950 - 2050

INTRODUCTION

Detroit has always led the way in car design.

As the city became the center of the American auto industry in the early 1900s, its studios became incubators for new ideas and innovative styles.

From engineers to assembly line workers, thousands of people dedicate their lives to creating the vehicles we see every day. But automobiles almost always begin as a designer's sketch in the studio.

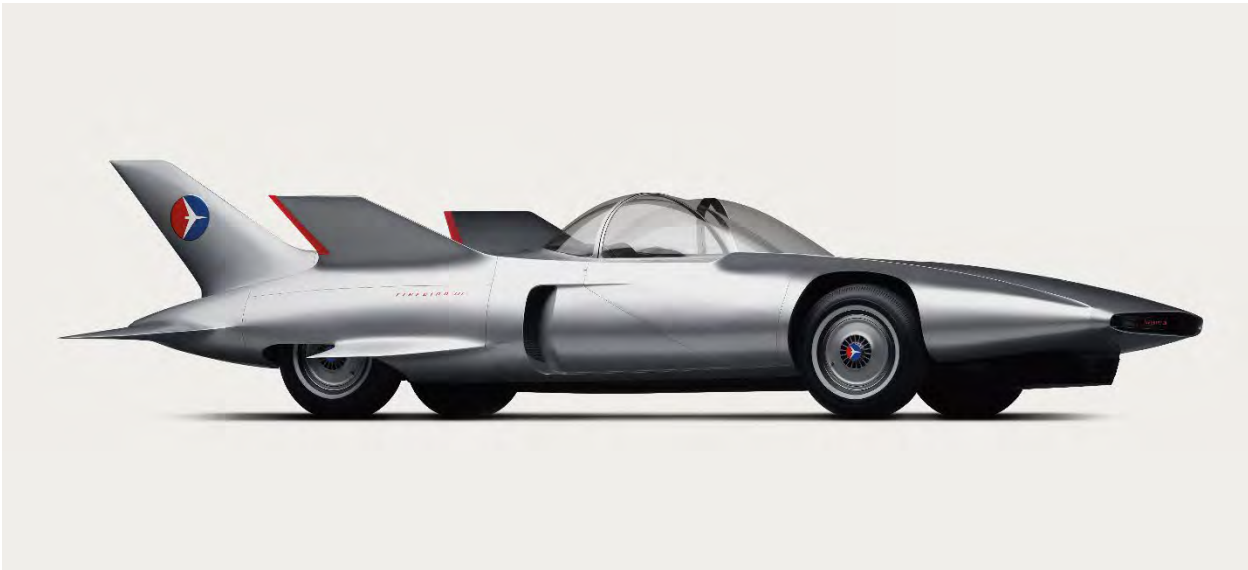
Imagine yourself driving the cars in this presentation around Detroit—a city known for producing some of the world's most stylish automobiles.



1950s

CONCEPT CAR

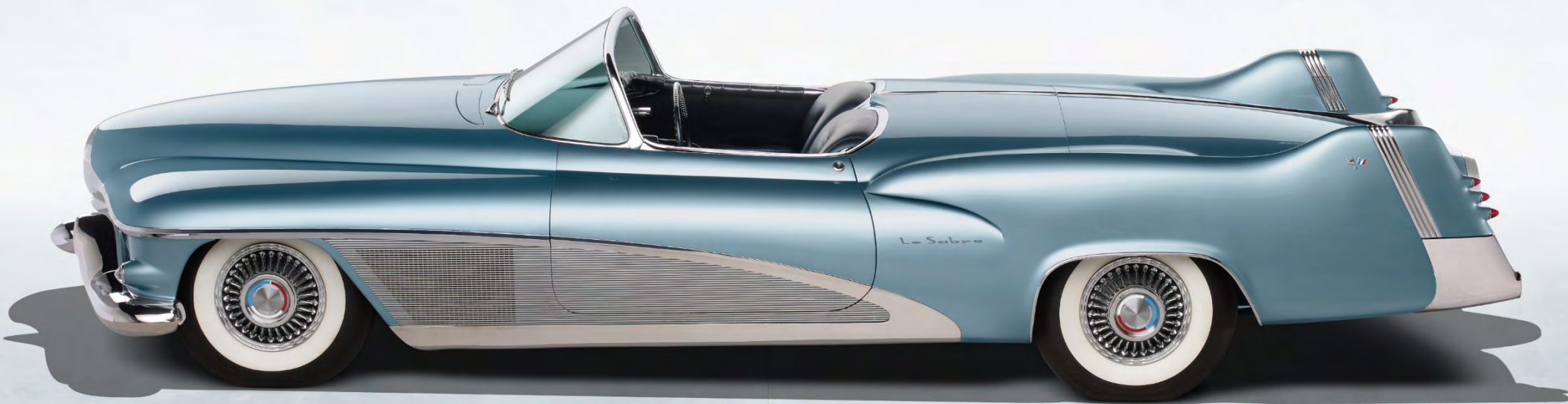
A concept car is a one-of-a-kind, experimental vehicle. A concept car's unique engineering or visual features affect how everyday cars will look and function in the future. These two concept cars were designed in the 1950s.



General Motors. *Firebird III*, 1958. General Motors Heritage Collection. Photograph © Michael Furman



General Motors. *Le Sabre*, 1951. General Motors Heritage Collection. James Haefner



JET INSPIRATION

The F-86 Sabre fighter jet inspired the Le Sabre's design



San Diego Air and Space Museum Archives

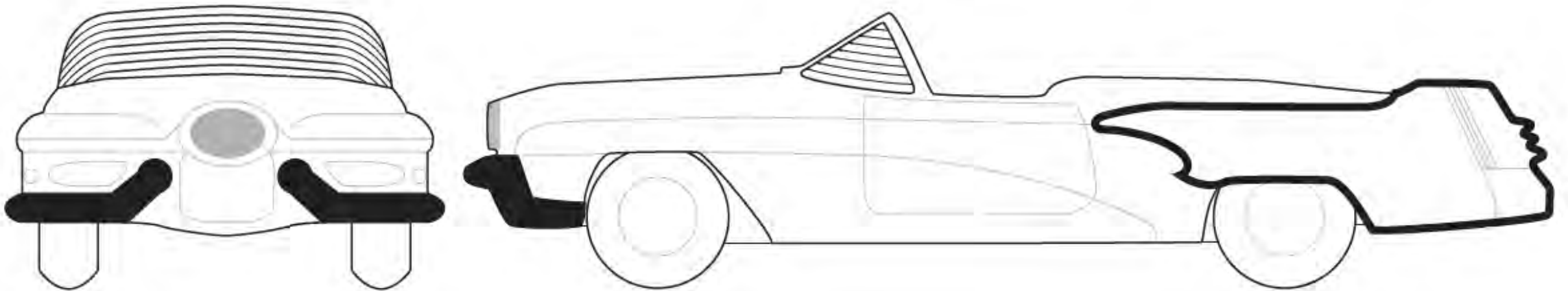


General Motors. *Le Sabre*, 1951. General Motors Heritage Collection. James Haefner

CURVED GLASS



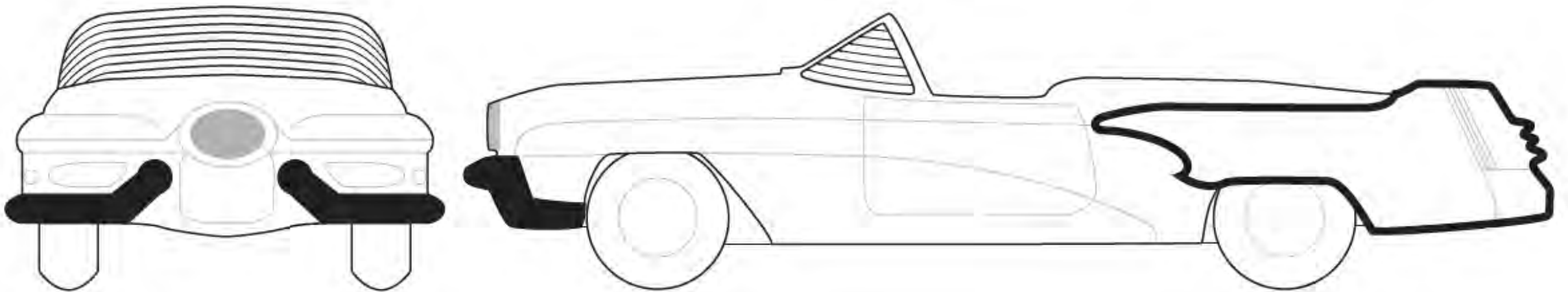
The windshield was inspired by the bubbles enclosing the pilot seat on a jet. The streamlined form was meant to reduce wind drag and give the driver a wider view.



Cassie Tompkins, Line drawing based on General Motors, *Le Sabre* 1951, 2020

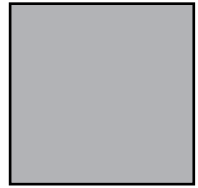
MILITARY INFLUENCE

The shape of the bumper looks like a warplane propeller. The rounded cones toward the center resemble bombs and bullets.

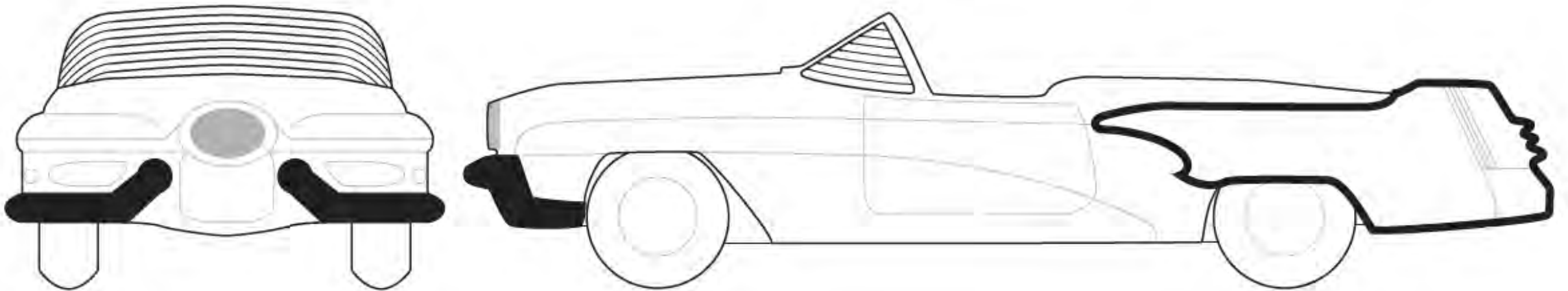


Cassie Tompkins, Line drawing based on General Motors, *Le Sabre* 1951, 2020

UNEXPECTED FUNCTION

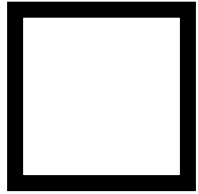


The jet intake does not funnel air to the engine. Instead, it swivels to reveal a headlamp, and its projecting shape emphasizes the car's long hood.

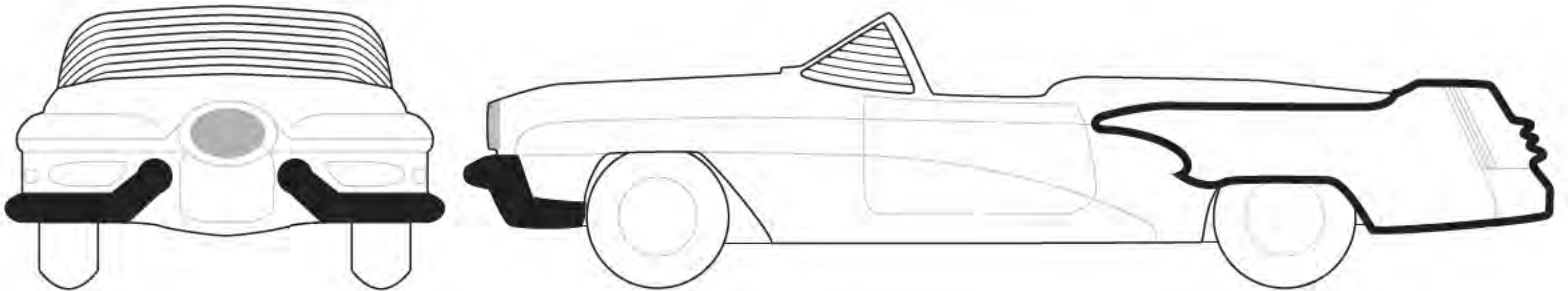


Cassie Tompkins, Line drawing based on General Motors, *Le Sabre* 1951, 2020

AIRPLANE TAILFINS



The rounded rear fenders were inspired by fins on airplanes. Designers played with this feature throughout the 1950s. They raised, lowered, sharpened, and lengthened the dramatic shape for mass-produced designs.



Cassie Tompkins, Line drawing based on General Motors, *Le Sabre* 1951, 2020

EXPERIMENTAL LABORATORY ON WHEELS

The Le Sabre's advanced features made the driving experience effortless.

A water sensor raised the convertible roof at the first sign of rain, and built-in lifts made it easy to change a tire.



The Le Sabre's built-in hydraulic lifts in action. General Motors LLC

COMPARE STYLES

The car on the left is the mass-produced Chrysler 300C. It was influenced by the Le Sabre concept car like many other mass-produced vehicles in the 1950s.



Chrysler Corporation. 300C, 1957. FCA. Chrysler is a registered trademark of FCA US LLC



General Motors. *Le Sabre*, 1951. General Motors Heritage Collection. James Haefner



General Motors. *Firebird III*, 1958. General Motors Heritage Collection Photograph © Michael Furman

CAR FOR TOMORROW

The towering, almost 5-foot-high fin, angular rear and front ends, and glass bubble enclosures give this show car a space-age appearance. Harley Earl, head of design at General Motors, described it as the car you might see an astronaut drive to the launchpad.



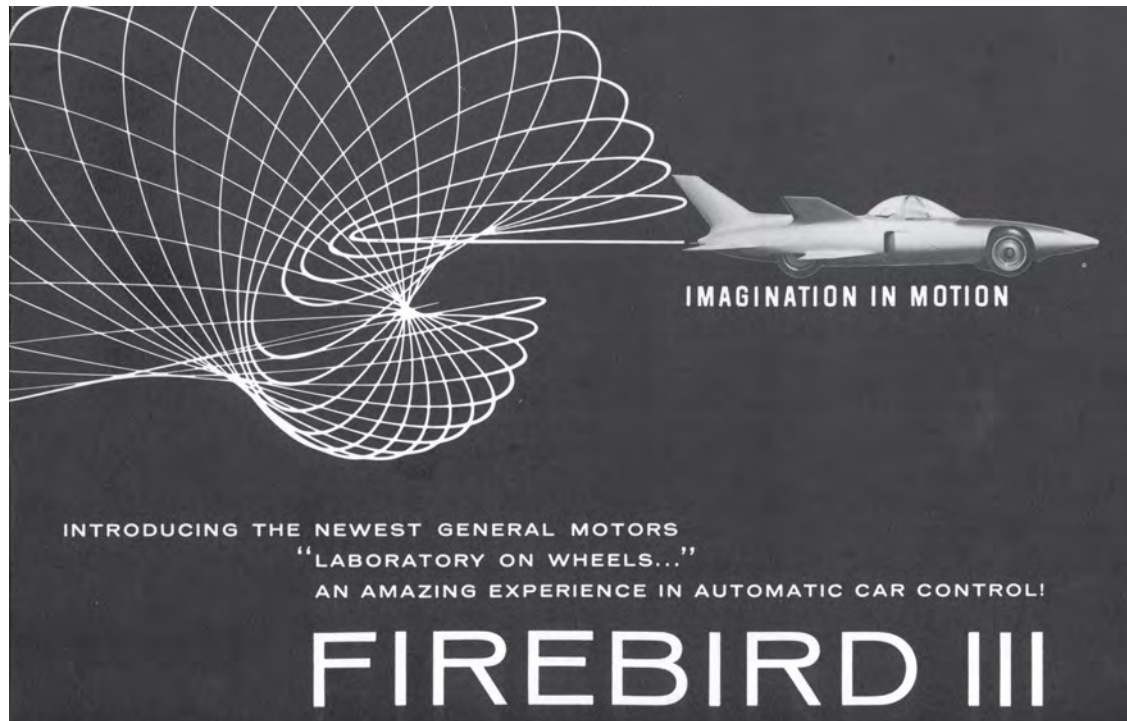
back



front

General Motors. *Firebird III*, 1958. General Motors Heritage Collection. Photograph © Michael Furman

FORWARD THINKING TECHNOLOGY



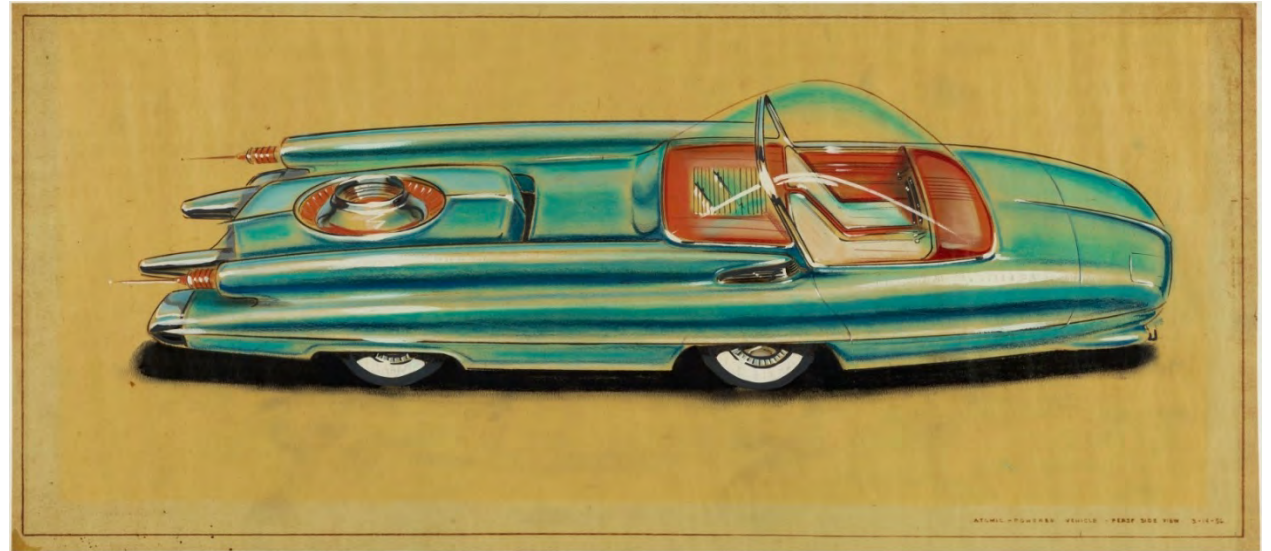
The cover of a brochure describing the Firebird III's experimental features. From the Collections of The Henry Ford

The Firebird III looked as futuristic as the technology whirring under its hood. Features included self-driving capabilities, a turbine-powered engine, and a single joystick for steering, speeding up, and braking.

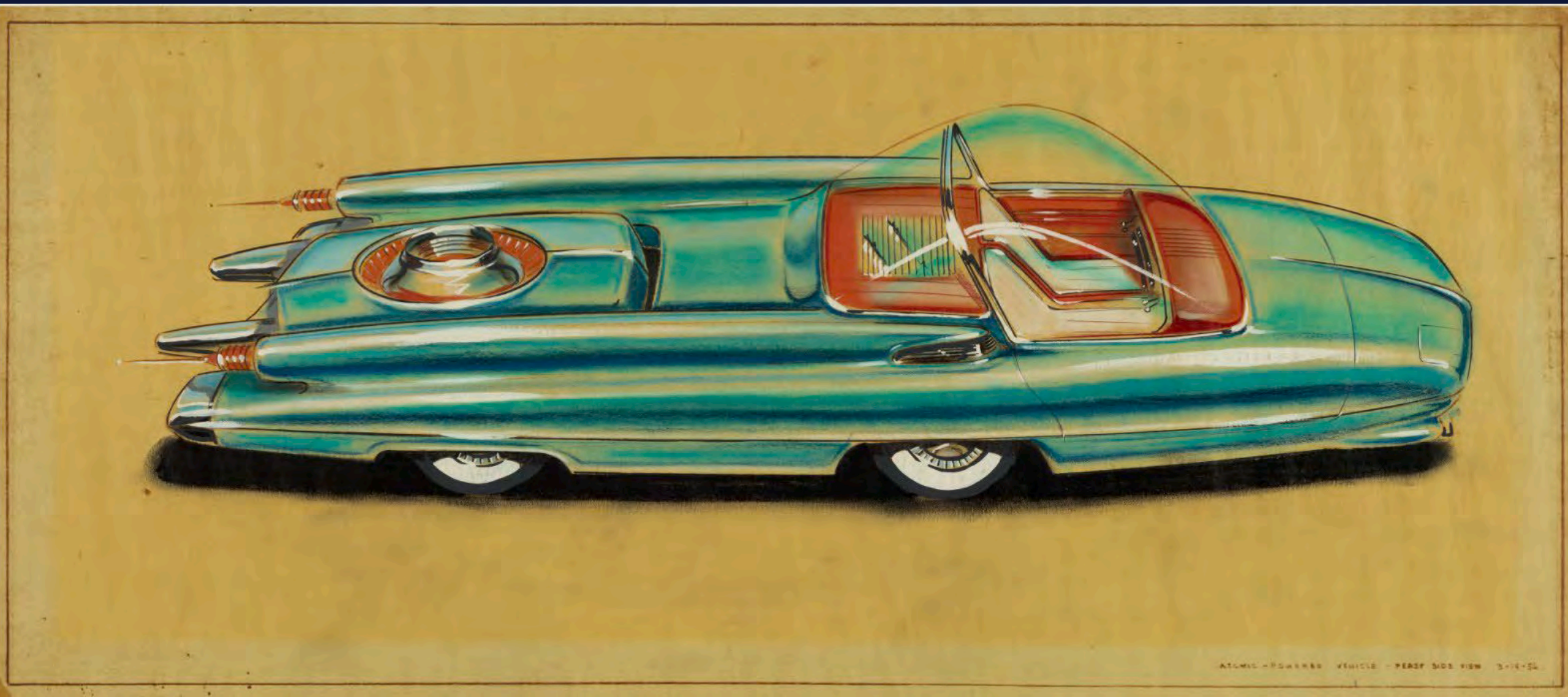
Over 60 years later, automakers are still experimenting with autonomous driving and new types of engines to make cars safer and more efficient. Joystick control exists today, making driving easier for people with disabilities.

IMAGINATIVE AND IMPRACTICAL

This drawing of the Ford Nucleon shows an imaginative—yet impractical—machine powered by nuclear energy. A nuclear-powered engine never became an option for mass-produced cars, but anything is possible on paper. Some features—like the raised fins and pointed lights—resemble those on popular production cars of the day.



Albert L. Mueller (American, 1927–2009). *Ford Nucleon Rear Side View*, 1956. Gouache, pastel, prisma-color, brown-line print on vellum; 12 1/2 × 28 1/2 in. (31.8 × 72.4 cm). Collection of Robert L. Edwards and Julie Hyde-Edwards.
Elliot Thayer



ATOMIC-POWERED VEHICLE - REAR SIDE VIEW 3-16-56

Albert L. Mueller (American, 1927–2009). *Ford Nucleon Rear Side View*, 1956. Gouache, pastel, prisma-color, brown-line print on vellum; 12 1/2 × 28 1/2 in. (31.8 × 72.4 cm). Collection of Robert L. Edwards and Julie Hyde-Edwards. Elliot Thayer

1960s / 1970s

MASS-PRODUCED CARS

Mass-produced cars are the ones people drive every day. They are designed with the customer in mind. These two cars were mass-produced in the 1960s and 1970s.



General Motors. Oldsmobile *Toronado*, 1966. General Motors Heritage Collection. Mark Bramley



Chrysler Corporation. Plymouth *Barracuda*, 1970. FCA. Chrysler is a registered trademark of FCA US LLC



General Motors. Oldsmobile *Toronado*, 1966. General Motors Heritage Collection. Mark Bramley

CAR FOR A CAR DESIGNER



General Motors. Oldsmobile *Toronado*, 1966. General Motors Heritage Collection.
Mark Bramley

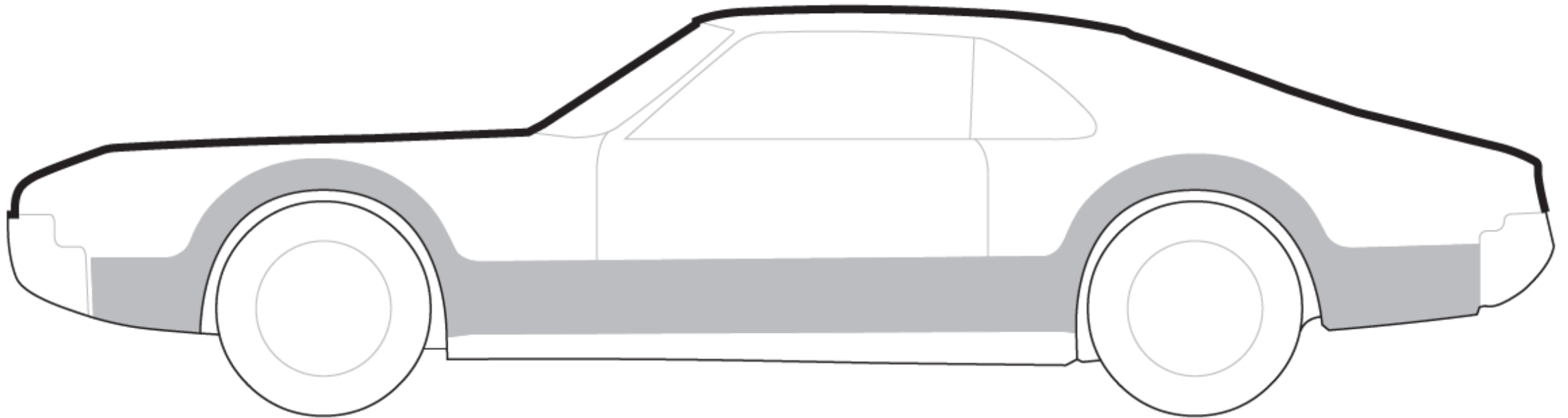
For the Toronado's exterior styling, William Mitchell, vice president of design at General Motors, challenged his team to create "a dream car that they would like to drive."

Designer David North proposed an abstract exterior with prominent wheel arches that emphasized the car's dynamic form and potential for speed. One design journalist observed, "Even when it's parked, it looks like it's crouching."

ARCHED WHEEL WELLS

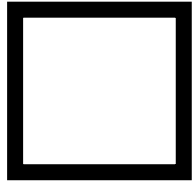


These arches are the only parts of the Toronado's side panels that pop out. They highlight the tires to suggest movement. Protruding wheel wells are a common design element on cars today.

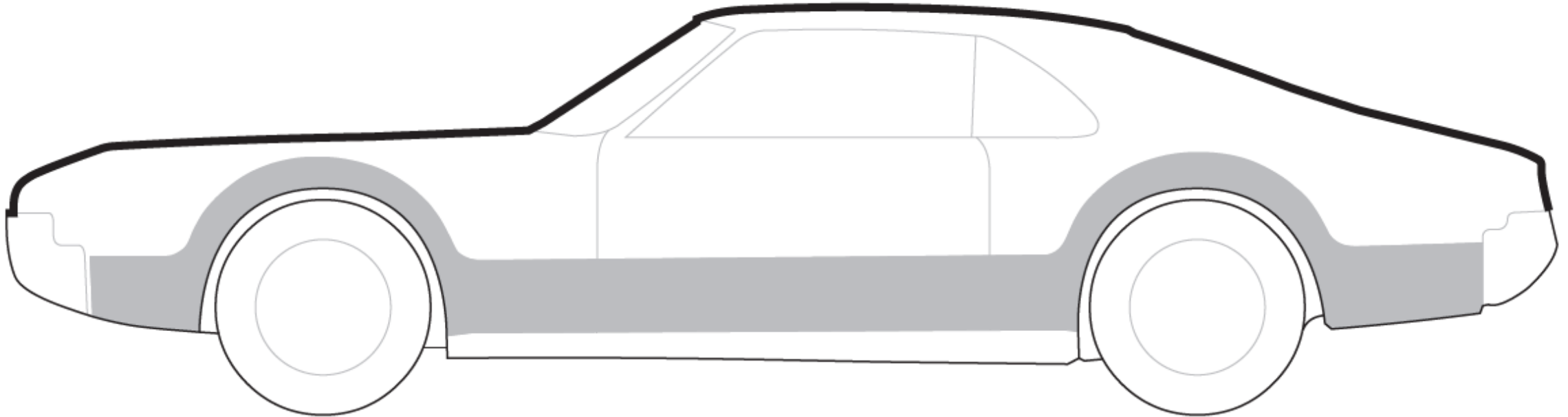


Cassie Tompkins, Line drawing based on General Motors. Oldsmobile *Toronado*, 1966, 2020

CLEAN PROFILE



The Toronado's profile is free of ornamental details, like the tall fins that were commonly found on cars of the 1950s. Its creators still looked to airplanes for inspiration but streamlined the form by eliminating tall fins.

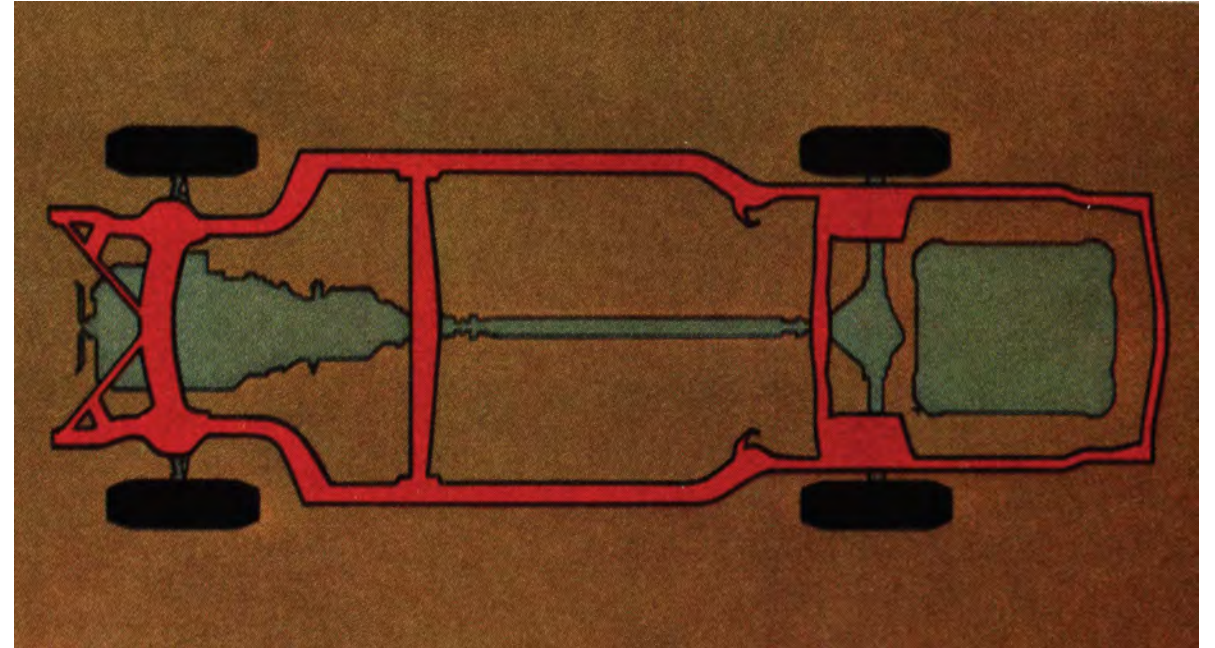


Cassie Tompkins, Line drawing based on General Motors. Oldsmobile *Toronado*, 1966, 2020

ENGINEERING FOR SPACIOUS INTERIORS

This is a driveshaft for a rear-wheel drive vehicle. The rod goes from the engine on the left to the rear tires on the right, which creates the hump in the middle of the inside of a car.

The Toronado's front-wheel drive engineering enhanced its spacious interior. The driveshaft is much shorter on a front-wheel drive car. This eliminates the hump that typically runs through the center of a car, creating more legroom.



A diagram of a rear-wheel drive car's driveshaft. Antique Automobile Club of America, Library and Research Center



AGGRESSIVE DESIGN

The Barracuda's form emphasizes the speed and power of its roaring engine. The hood scoops resemble flared nostrils. Pins securing the hood are inspired by race cars.



Donald Hood (American, 1934–2018). *'71 Barracuda Front End Facelift Concept*, 1968. Crayon, gouache, ink, felt marker, prisma-color, pastel on vellum; 20 1/4 × 26 7/8 inches (51.4 × 68.3 cm). Collection of Robert L. Edwards and Julie Hyde-Edwards. Elliot Thayer



Chrysler Corporation. Plymouth *Barracuda*, 1970. FCA Chrysler is a registered trademark of FCA US LLC

LOUD COMPETITOR

Chrysler created the Barracuda to challenge the Ford Mustang's success. Both cars appealed to the same buyers: people who desired speed, flash, and power at an affordable price during a period of economic downturn.



Ford Motor Company. *Mustang*, 1967. Lent by Moray Callum. Betweenwhitelines



Chrysler Corporation. Plymouth *Barracuda*, 1970. FCA Chrysler is a registered trademark of FCA US LLC

LUXURY WITHOUT SAFETY



Artist James Sherburne painted a luxurious blue interior with comfortable, spacious seats. But notice what's missing: seatbelts. He created this proposal before they were required by law in 1968. Other life-saving guidelines soon followed. New exterior features like shock absorbing bumpers were creatively integrated into iconic Detroit automobiles by designers throughout the next two decades.

James Sherburne, American. *Ford Interior Proposal*, ca. 1965. Gouache and acrylic on paper; 17 15/18 x 30 3/4 in. (45.6 x 78.1 cm). Collection of Robert L. Edwards and Julie Hyde-Edwards. Elliot Thayer



James Sherburne, American. *Ford Interior Proposal*, ca. 1965. Gouache and acrylic on paper; 17 15/18 x 30 3/4 in. (45.6 x 78.1 cm). Collection of Robert L. Edwards and Julie Hyde-Edwards Elliot Thayer

1980s

DESIGNED FOR THE INSIDE

Focusing on comfort, the designer extended the Portofino's passenger cab by shortening the engine compartment and pushing the wheels toward the front and back. This concept car's graceful curves and open interior make it both sporty and spacious.



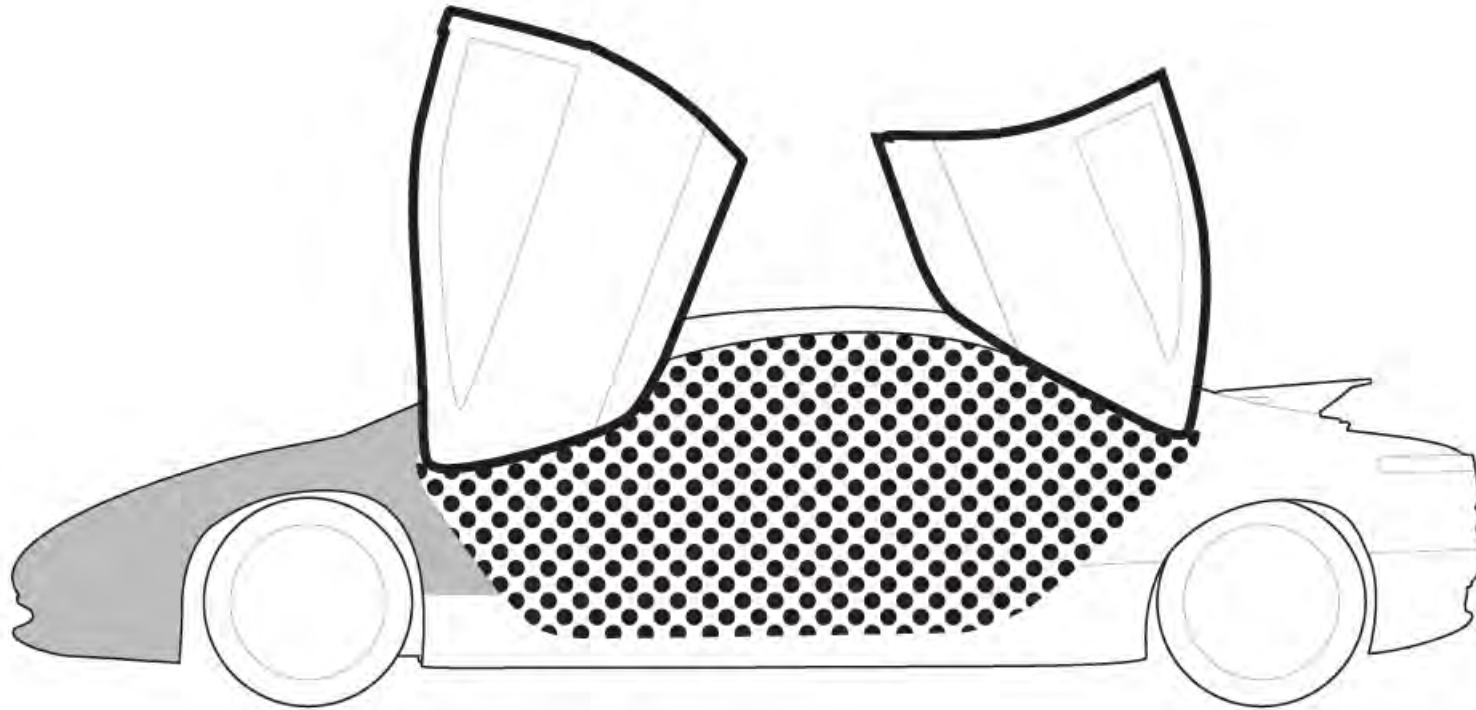
Chrysler Corporation. Lamborghini *Portofino*, 1987. FCA.
Chrysler is a registered trademark of FCA US LLC





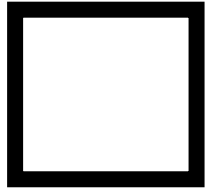
QUIET AND SLEEK

The car's streamlined and shortened hood communicates efficient speed rather than brute engine power.

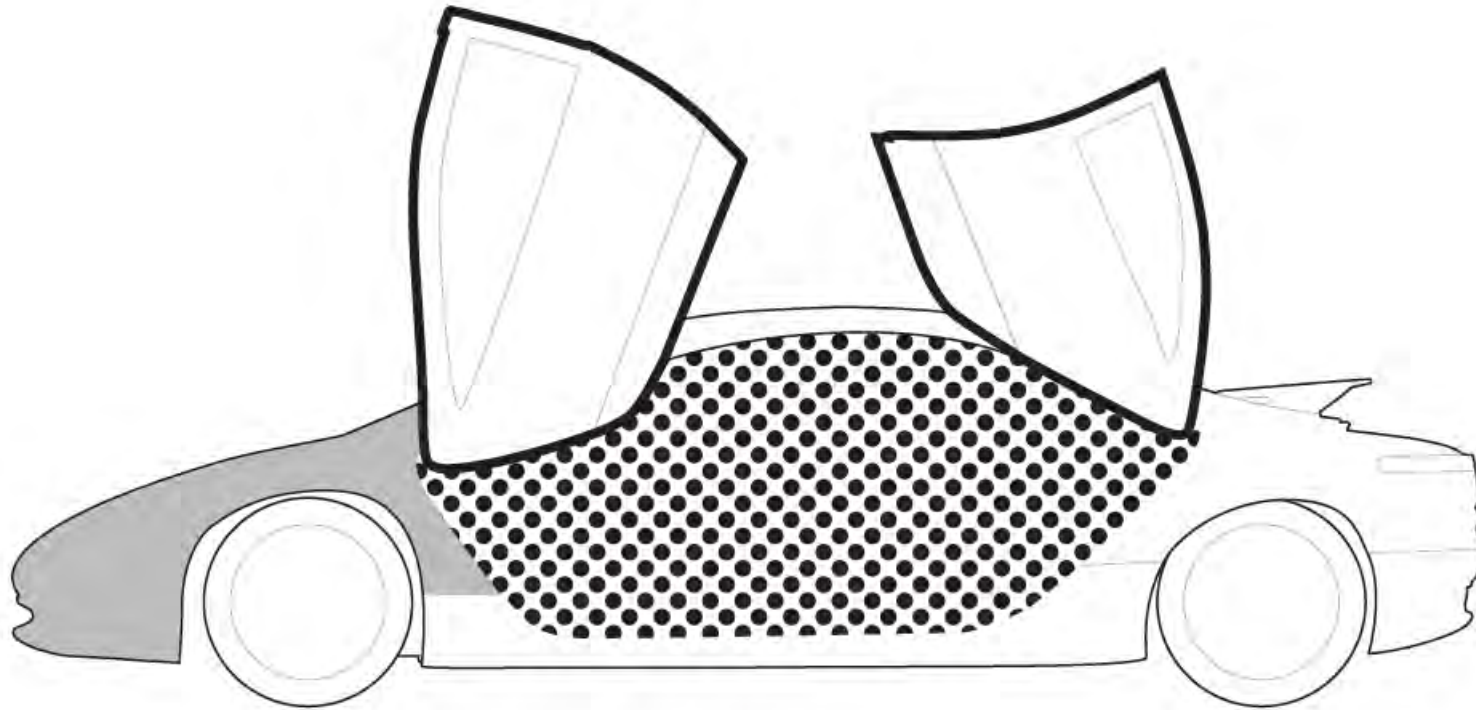


Cassie Tompkins, Line drawing based on Chrysler Corporation. Lamborghini *Portofino*, 1987, 2020

WIDE OPEN SPACE

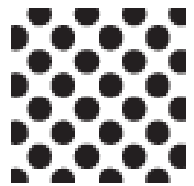


The doors extend up, revealing plenty of room for easy entry into the car.

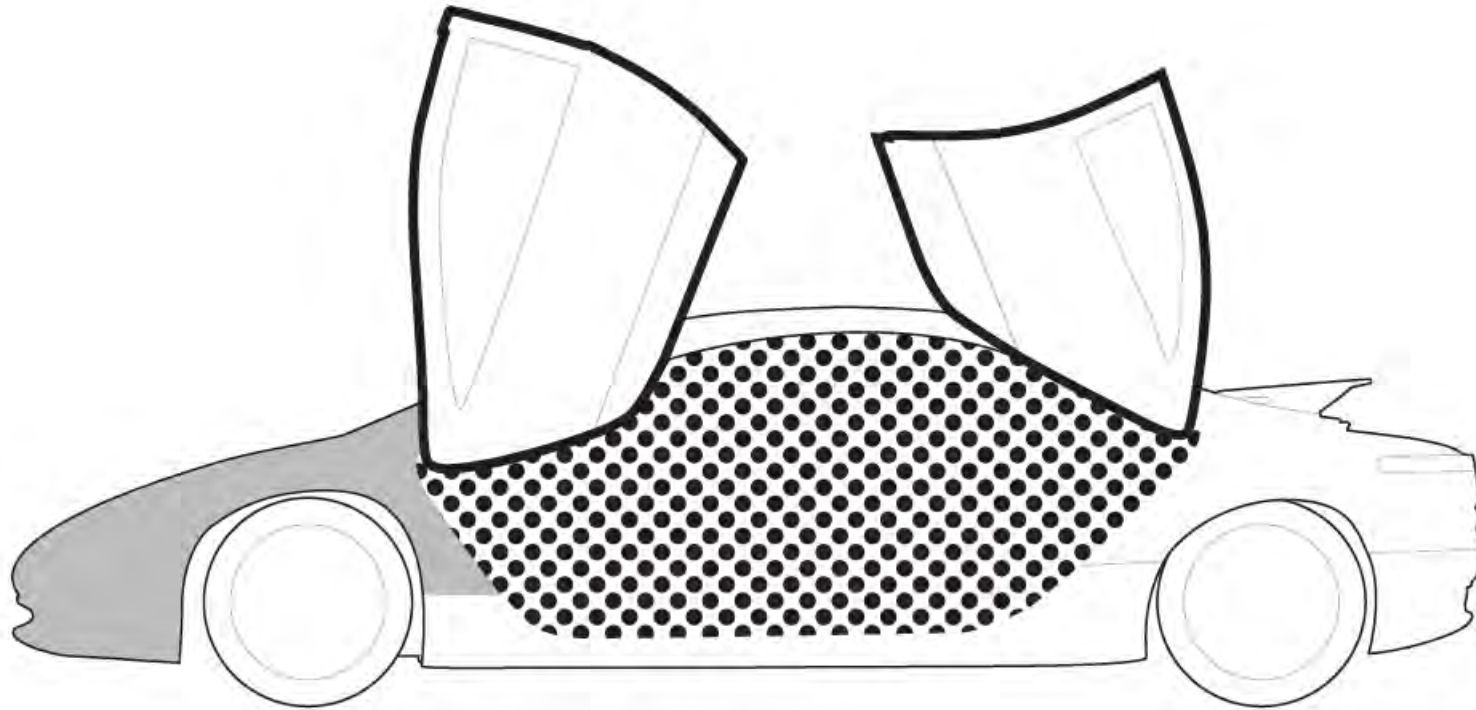


Cassie Tompkins, Line drawing based on Chrysler Corporation. Lamborghini *Portofino*, 1987, 2020

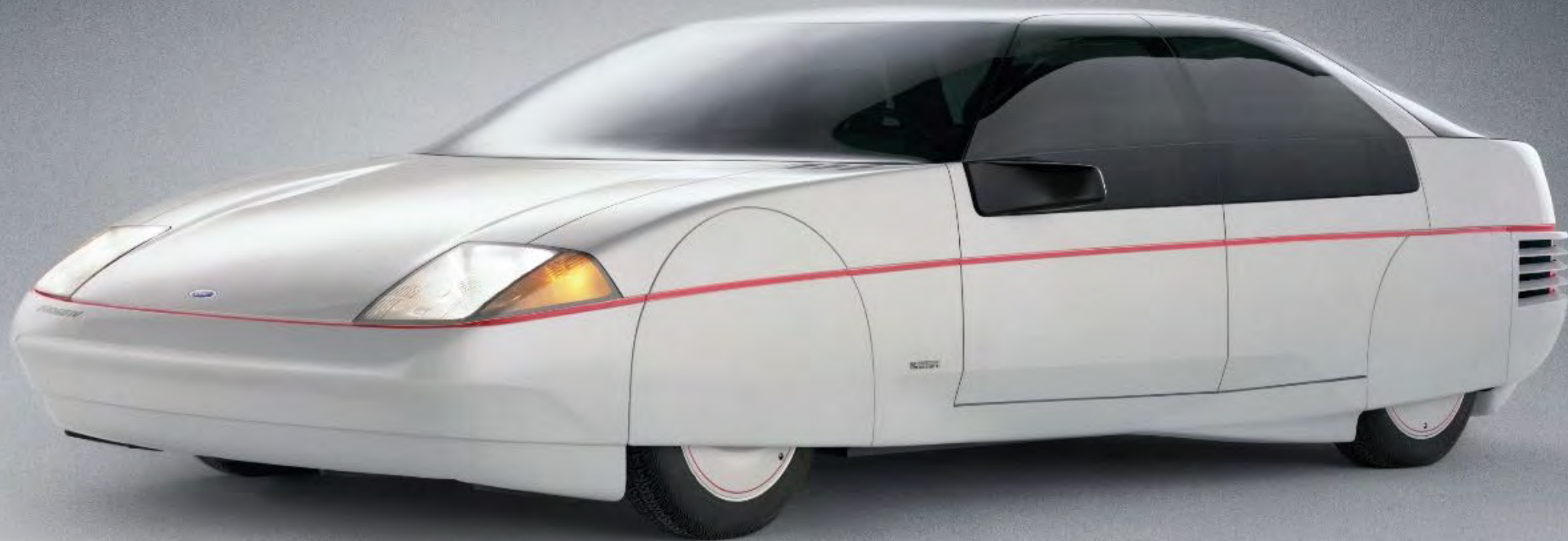
ENGINEERED FOR COMFORT



There is no support column separating the front and back of the car. This engineering adjustment is key to the spacious design of the interior.



Cassie Tompkins, Line drawing based on Chrysler Corporation. Lamborghini *Portofino*, 1987, 2020



WIND-CHEATING SUPERCAR

Ford Motor Company advertised the Probe IV as “the most aerodynamic passenger car in the world.” Most of this concept car’s design elements are meant to reduce wind drag. An angled engine allows for its dramatically sloped hood, which cuts through the air. The fixed side windows mount flush with the car’s body, minimizing drag from a recess.

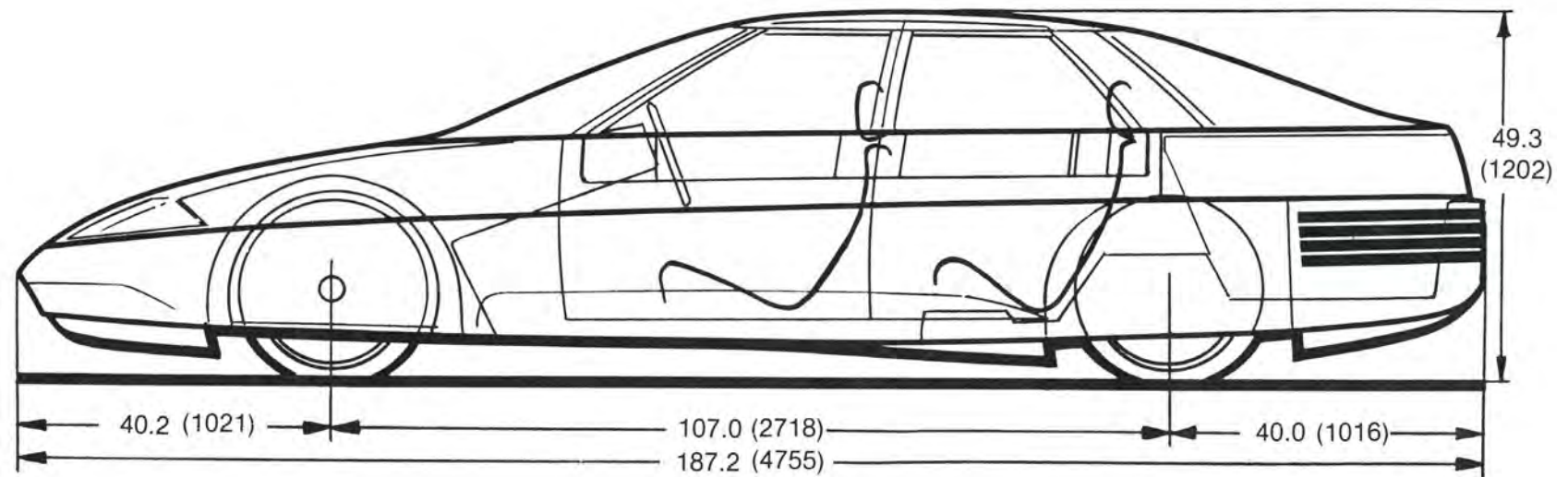


Ford Motor Company. *Probe IV*, 1983. Rear three-quarter view.
From the Ford Motor Company archives



PRACTICAL INNOVATION

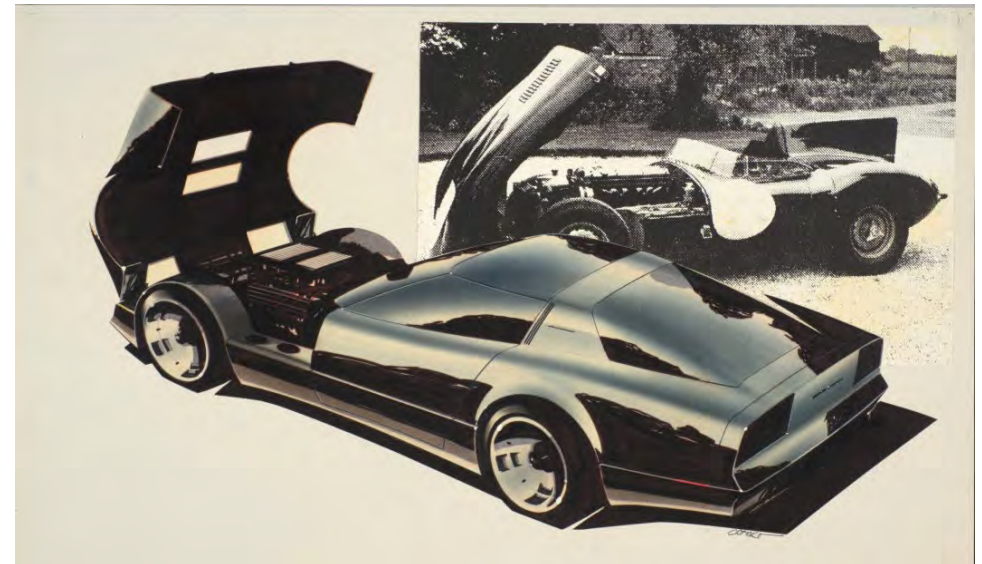
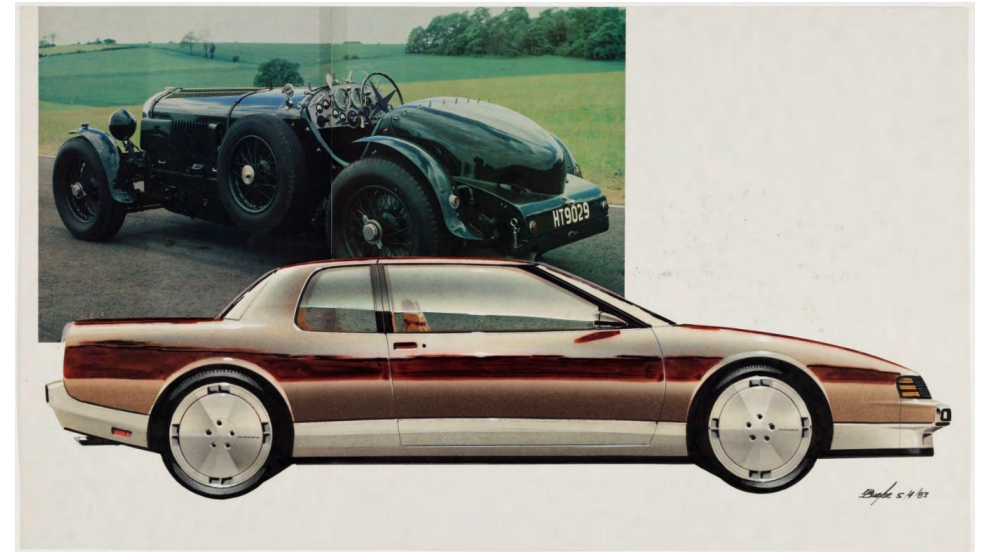
Part of the Probe's futuristic appearance was in response to practical concerns such as the high price of gasoline and new environmental laws. These concerns led designers to imagine new technologies that could transform driving. For example, the Probe's suspension automatically adjusts the car's height at different speeds, creating the most efficient profile at every moment.

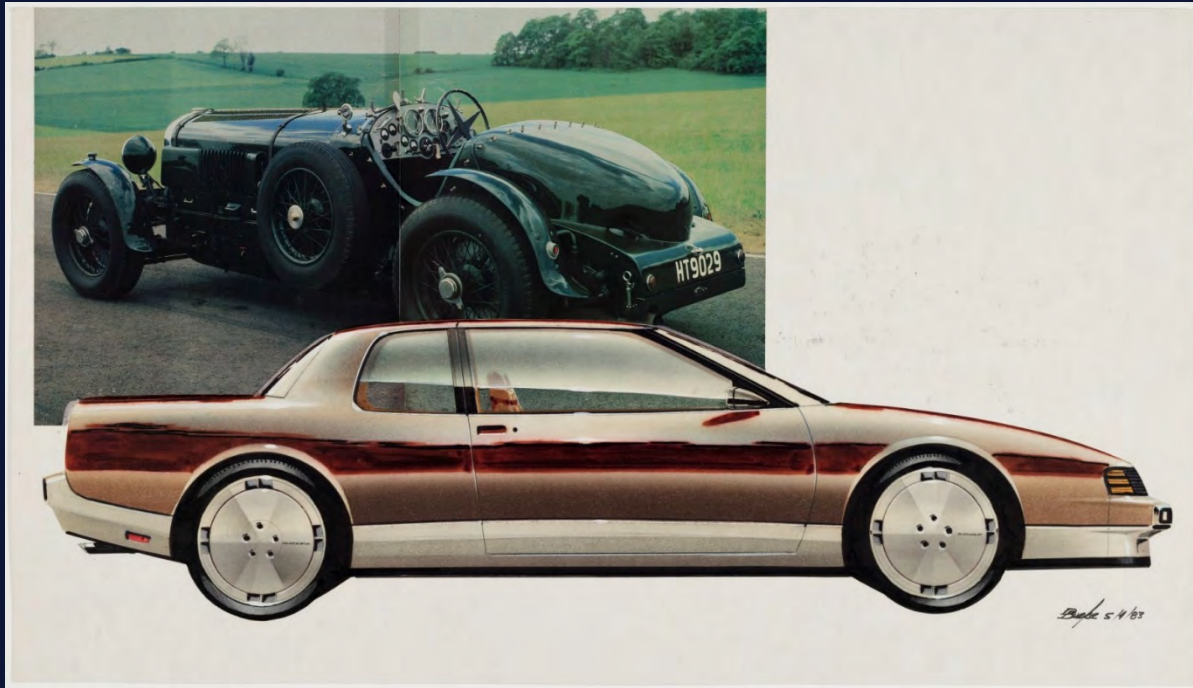


Promotional Brochure for Probe IV, 1984

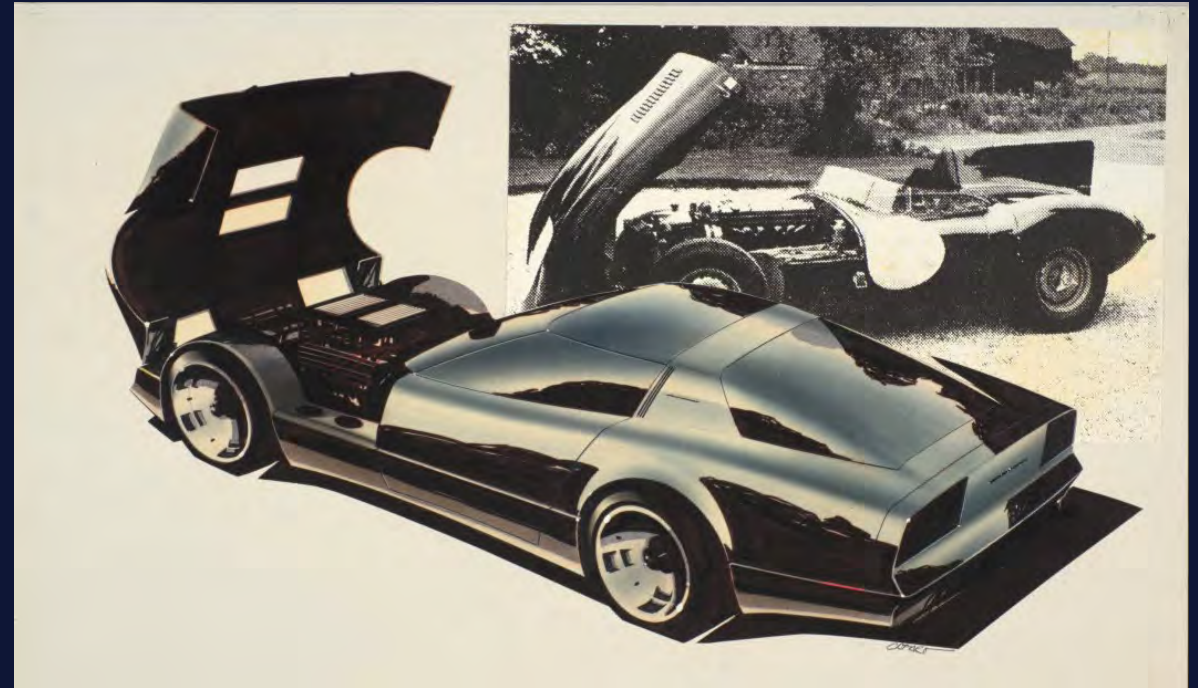
HISTORIC CONNECTIONS

Designers John Cafaro and Dennis Burke both added cutout images of historic cars to their drawings hanging nearby. One used the technique to highlight a shared feature, the clamshell hoods that hinge in the front. The other suggests a shared attitude between a historic coupe and a modern update. As designers experiment with modern forms, they also look to the past for inspiration.





Dennis Burke (American, born 1951). *Coupe Proposal*, about 1980. Crayon, gouache, ink, colored tape, watercolor, collage, graphite, attached to board; photographic reproduction attached to board. 14 11/16 X 25 5/8 in. (37.5 x 65.1 cm). Dennis Burke Collection.
Detroit Institute of Arts



John Cafaro (American, born 1955). *Rendering of Proposed Chevrolet Corvette Design*, ca. 1979. Photographic print, airbrush, marker, and collage on paper board. From the Collections of The Henry Ford, Dearborn, Michigan.
Detroit Institute of Arts

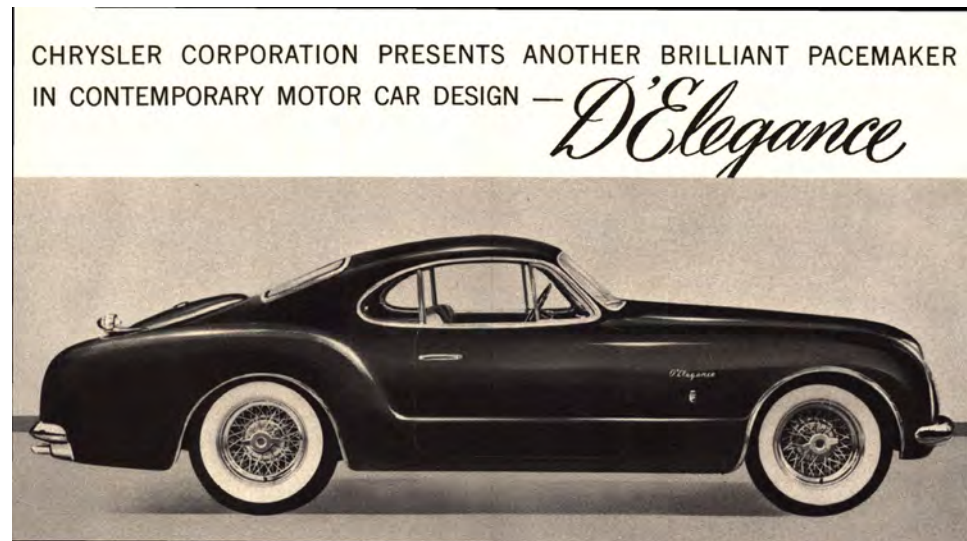
1990s

A GLANCE BACK

Designer Isamu Shikado based the curved body shape and round front grille of this concept car on Chrysler's 1953 D'Elegance. He elongated and streamlined the proportions of the earlier car to give the Chronos a modern look.



Chrysler Corporation. Chronos, 1998. FCA. Chrysler is a registered trademark of FCA US LLC



The 1953 D'Elegance was the inspiration for the Chronos. Antique Automobile Club of America, Library and Research Center

A NOSTALGIC MARKET

Although the Chronos was never mass-produced, its form influenced some of the cars Chrysler introduced in the years that followed. At the time, revivals of the past were a powerful trend in fashion, film, and architecture.

The image above shows the Chrysler 300, one of the many 90s designs inspired by the Chronos.



The Chrysler 300 was one of many vehicles from the 1990s that were inspired by classic cars of the past. FCA Archives. Chrysler is a registered trademark of FCA US LLC



Chrysler Corporation. *Chronos*, 1998. FCA. Chrysler is a registered trademark of FCA US LLC

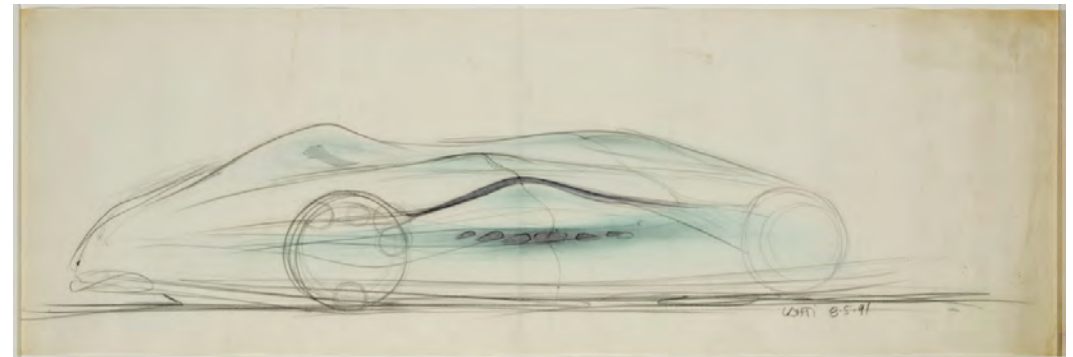
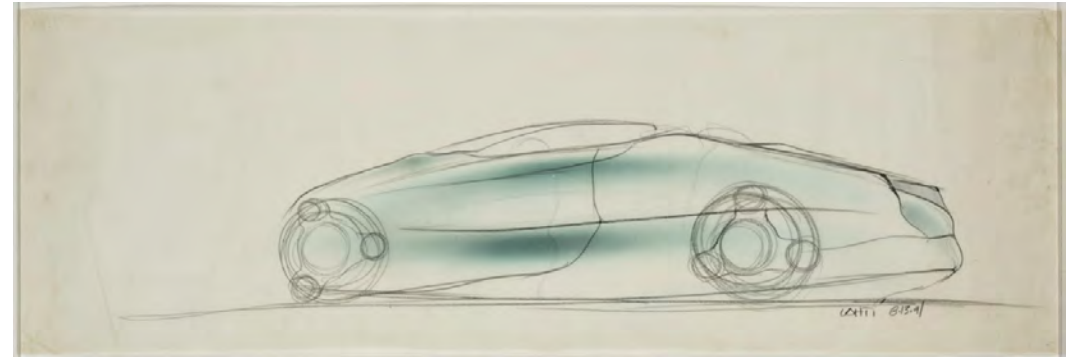


IDEAS IN MOTION

These rough sketches, created early in the design process by Taru Lahti, resulted in the experimental 1992 Ford Focus concept car. You can tell by the sketchy and smudged lines that the designer was rapidly exploring potential shapes for the car.



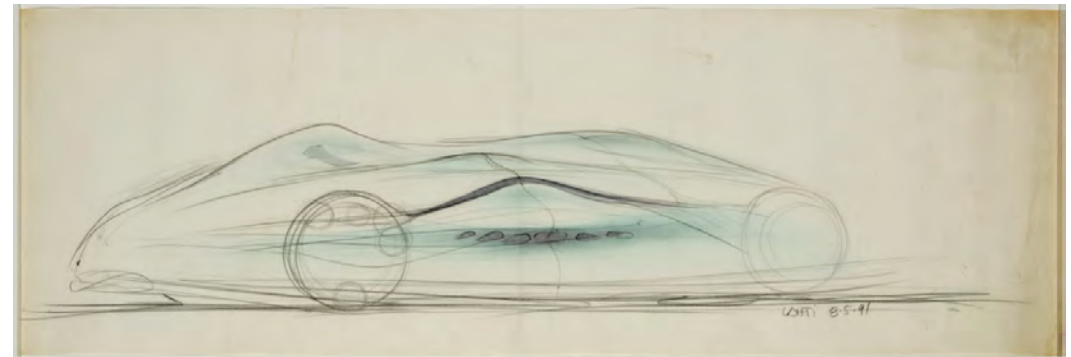
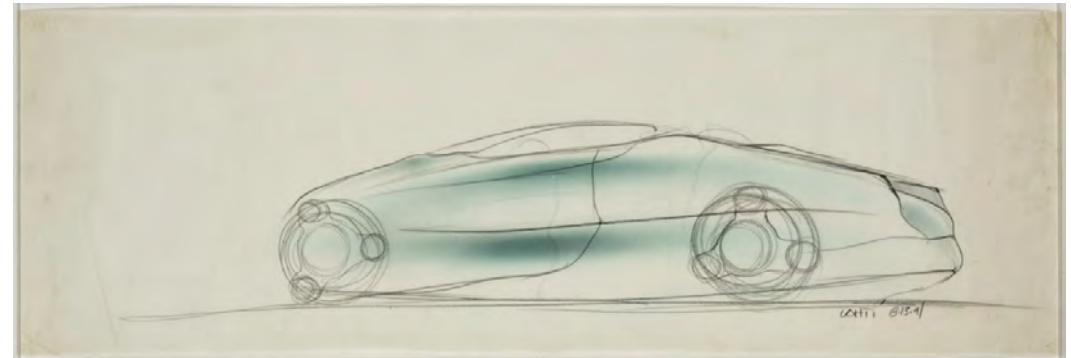
1992 Ford Focus concept car. Courtesy of Revs Institute, Karl Ludvigsen Photograph Collection.



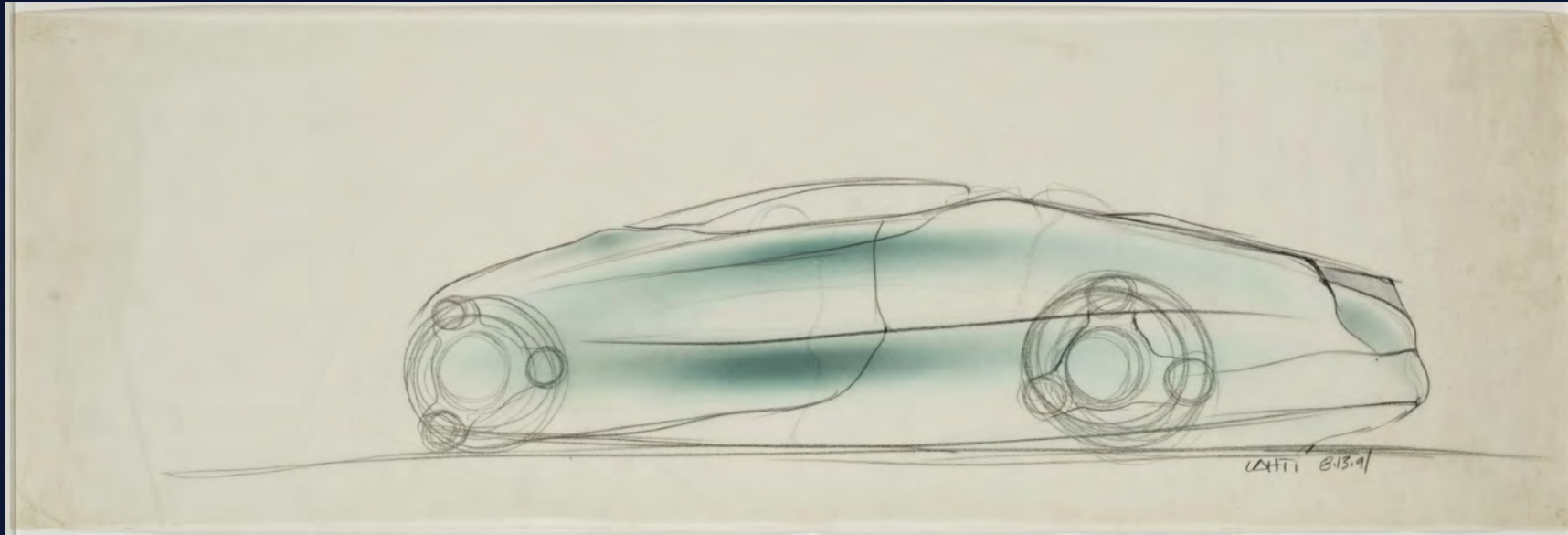
Top - Taru Lahti (American, born 1966). *Cutline Concept*, 1991. Prismacolor pencil and pastel on vellum; 11 7/8 x 36 1/8 in. (30.2 x 91.8 cm). Collection of the artist. Detroit Institute of Arts. Bottom - Taru Lahti (American, born 1966). *Two Seat Concept*, 1991. Prismacolor pencil and pastel on vellum; 12 x 36 1/16 in. (30.5 x 91.6 cm). Collection of the artist. Detroit Institute of Arts

IDEAS IN MOTION

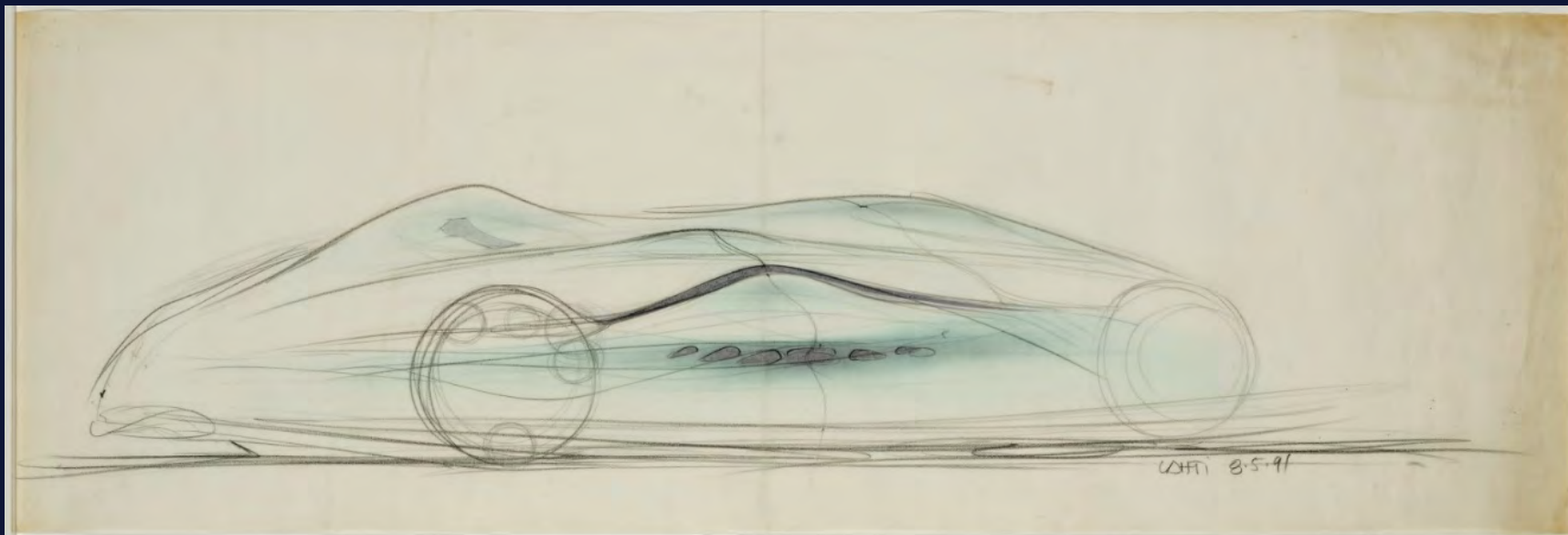
In the top sketch, the designer played with an uneven, wave-like body, using dark lines to highlight asymmetrical shapes. In the bottom drawing, he used a blocky shape with large tires to capture a sense of immense potential energy, like in a compressed spring.



Top - Taru Lahti (American, born 1966). *Cutline Concept*, 1991. Prismacolor pencil and pastel on vellum; 11 7/8 x 36 1/8 in. (30.2 x 91.8 cm). Collection of the artist. Detroit Institute of Arts. Bottom - Taru Lahti (American, born 1966). *Two Seat Concept*, 1991. Prismacolor pencil and pastel on vellum; 12 x 36 1/16 in. (30.5 x 91.6 cm). Collection of the artist. Detroit Institute of Arts



Taru Lahti (American, born 1966).
Cutline Concept, 1991. Prismacolor
pencil and pastel on vellum; 11 7/8
x 36 1/8 in. (30.2 x 91.8 cm).
Collection of the artist. Detroit
Institute of Arts



Taru Lahti (American, born 1966).
Two Seat Concept, 1991.
Prismacolor pencil and pastel on
vellum; 12 x 36 1/16 in. (30.5 x 91.6
cm). Collection of the artist. Detroit
Institute of Arts

2000s

INTO THE NEXT CENTURY

Contemporary Detroit designers are working at a time when the promise of self-driving capabilities, electric-powered engines, and alternative fuels means that future cars will look and function much differently than they do now.

Today, the consumer market is dominated by sport utility vehicles and trucks, rather than the two-door and four-door cars that were the hallmarks of Detroit automotive design throughout the past 70 years.

Nevertheless, the continued allure of speed and mechanical power allows designers to create ambitious cars and new ideas of modern driving. What will cars look like in the future? And how will they shape the fantasy and reality of driving?

DESIGNERS' HANDS AT WORK



Ford Motor Company. *GT*, 2017. Collection of Jody and Tara Ingle.

The 2017 GT's swept-back lines and fragmented surfaces suggest extreme speed. Designer Moray Callum recalls that parts of the car were produced “as sketched” because of the rapid progression from drawing to prototype. The

GT was developed quickly beginning in 2013 so it could debut at the January 2015 North American International Auto Show in Detroit.

LOOK OF ENGINEERING

The GT's overall shape was developed in close collaboration with engineers, so that decisions about its looks would contribute to its racing ability. Ford designer Garen Nicoghosian described its shape as a “collection of items that collect air, avoid air, or make better use of air.”



The design team adjusting details on a clay model of the 2017 GT. Ford Motor Company Archives

ARTIST KRISTEN BAKER

Growing up in a household where Formula 1 races were often on the television, artist Kristin Baker became familiar with the exciting yet dangerous aspects of automotive sports. In this painting, she evokes the pace, noise, and hue of a high-speed race.

The explosion of jagged shapes and bright colors could suggest cars zooming around the track or a roaring crowd. Are the cloud-like shapes smoke from squealing tires— or a crash? Although this painting may capture the excitement around speed, the artist also sees racing as a symbol for the spectacle, aggression, and violence of contemporary culture.



Kristin Baker (American, born 1975). *The Unfair Advantage*, 2003.
Acrylic on PVC on board; 60 1/4 x 108 1/4 in. (153 x 275 cm).
Mattatuck Museum, Waterbury, Connecticut, Gift of Pam and Jack Baker, 2017.



Kristin Baker (American, born 1975). *The Unfair Advantage*, 2003. Acrylic on PVC on board; 60 1/4 x 108 1/4 in. (153 x 275 cm). Mattatuck Museum, Waterbury, Connecticut, Gift of Pam and Jack Baker, 2017.

This presentation was designed to support special exhibition
Detroit Style: Car Design in the Motor City, 1950–2020
at the Detroit Institute of Arts.



DETROIT STYLE

CAR DESIGN IN THE MOTOR CITY
1950-2020



Detroit Style: Car Design in the Motor City, 1950-2020
is organized by the Detroit Institute of Arts.

Major funding is generously provided by the Ford Motor Company Fund, General Motors, and Mrs. Jennifer Adderley in loving memory of her husband, Mr. Terence E. Adderley.



Additional funding is provided by the Marvin and Betty Danto Family Foundation, FCA US LLC, The Suburban Collection, Jennifer & David Fischer and Darcy & David Fischer, Jr., and Consolidated Rail Corporation on behalf of William Milliken.



Additional support is provided by Barbara and William U. Parfet, TCF National Bank, The Fisher & Company Family, and Friends of African & African American Art.



Major funding for the exhibition catalogue is generously provided by the Margaret Dunning Foundation.



DETROIT STYLE CAR DESIGN IN THE MOTOR CITY, 1950-2020